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No. 54

UNITED STATES STEEL CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

MONDAY, MARCH 11, 1912

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

834727

UNITED STATES STEEL CORPORATION.

Committee on Investigation of the
United States Steel Corporation,
House of Representatives,
Washington, D. C., Monday, March 11, 1912.

The committee met at 11 o'clock a. m., Hon. Augustus O. Stanley (chairman) presiding.

TESTIMONY OF MR. G. M. FREER.

The witness was sworn by the chairman.

The Chairman. Where do you live, Mr. Freer?

Mr. Freer. Columbus, Ohio.

The Chairman. What is your business?

Mr. Freer. I am a commercial traffic manager; that is, a traffic manager for commercial and industrial interests.

The Chairman. I believe you were subpœnaed to appear before the committee to-day?

Mr. Freer. Yes.

The Chairman. You say you are a consulting traffic manager; what is the nature of your business?

Mr. Freer. To advise shippers and manufacturers as to the proper adjustment of freight rates, and, if necessary, to assist them in preparing their cases to present to the Interstate Commerce Commission.

Mr. Young. Where is this gentleman's residence?

The Chairman. He stated he lives in Columbus, Ohio.

Mr. Young. Columbus, Ohio?

Mr. Freer. Yes, sir.

The Chairman. How long have you been engaged in this work?

Mr. Freer. The present work?

The Chairman. Yes.

Mr. Freer. About two years.

The Chairman. What was your occupation prior to that time?

Mr. Freer. Just immediately prior to that time I was traffic manager for the Columbus Chamber of Commerce or Board of Trade, for about a year and a half. Prior to that I was in the railroad business for about 20 years.

The Chairman. You have had practical experience in the railroad business?

Mr. Freer. Yes, sir; 20 years' experience.

The Chairman. Please explain to the committee the nature and extent of that employment—your railroad experience—what work you have done with the railroads.

Mr. Freer. That 20-year period in which I was in the railroad business was in the traffic department exclusively, starting as clerk in the general freight office, and going through the various grades of work in the office.

Mr. Young. With what railroad?

Mr. Freer. The Cincinnati, Washington & Baltimore was the railroad with which I started my railroad work. It is now a part of the Baltimore & Ohio System.

I finally became chief clerk in the general freight office, and from that I was made a general agent—a sort of soliciting position, soliciting business, looking after the traffic interests on the outside. I was in that line of work for about 11 or 12 years.

I was principally with the Baltimore & Ohio or some of its allied lines, with the exception of about three or four years when I was with the Pennsylvania lines.

The Chairman. In your business experience have you had anything to do with the matters of making rates, of securing rates, or in constructing tariff rates?

Mr. Freer. Yes; I have had a good deal to do with that.

The Chairman. Explain to the committee how you were engaged in that particular phase of the railroad business.

Mr. Freer. I had a good deal to do with that when I was in the general freight office, where the tariffs were made up and published. Then in my outside work I still had a great deal of that kind of work to do, keeping the rates in line for the manufacturers and shippers in the territory which was under my charge as general agent.

The Chairman. Did that require a study and understanding of transportation and traffic conditions?

Mr. Freer. I would say so; yes.

The Chairman. Have you any special knowledge or information which would enable you to give information to this committee respecting the movement of commodities to and from Lake ports; for instance, on Lake Erie? Are you in any way familiar with the transportation of ore from the various dock ports on Lake Erie to the consuming points where the ore is carried?

Mr. Freer. I have recently had quite a good deal to do with that, not directly with ore, but in connection with coal. I have been interested in several cases before the State and Interstate Commerce Commissions affecting the rates on Lake cargo coal as it is known; and in connection with those coal cases the ore movement has been investigated and mentioned and quite a little information has been gathered in relation to ore as bearing on this question of the coal rates in the opposite direction.

The Chairman. What are the ports on Lake Erie where the ore is received?

Mr. Freer. The ports from Buffalo to Toledo—Buffalo, Erie, Conneaut, Ashtabula, Fairport, Cleveland, Lorain, Huron, and Toledo.

The Chairman. You will notice the large map which has been placed over there on the side of this room, and I wish you would explain on that map the course of this ore.

Mr. Freer. Do you wish me to go over there and point it out?

The Chairman. Yes.

The members of the committee and the witness thereupon proceeded over to the map.

The Chairman. I will ask you to point out these docks where the ore is received.

Mr. FREER. Starting with Buffalo, there is Erie, Conneaut, Ashtabula, Fairport, Cleveland, Lorain, Huron, and Toledo. It is possible there is a little ore handled at Sandusky, but there would be very little.

The CHAIRMAN. I will ask you to designate the railroads over which that ore is carried to its usual point of destination.

Mr. FREER. There are various roads out of Buffalo, the New York Central, the Pennsylvania—quite a number of roads out of Buffalo.

Mr. YOUNG. Is that ore carried over the Central to any extent?

Mr. FREER. I think not. I do not think there is very much ore out of Buffalo via the New York Central.

The CHAIRMAN. I presume that ore goes to the Lackawanna Steam Co.?

Mr. FREER. The plants at Buffalo consume the bulk of ore that is taken there.

Mr. YOUNG. You spoke of other roads at Buffalo; what are they?

Mr. FREER. The Lehigh Valley, the New York Central, Pennsylvania, Lackawanna, Erie, and the Buffalo, Rochester & Pittsburgh.

Mr. BEALL. The ore that goes to Buffalo and that is not consumed there; to what other point is it carried?

Mr. FREER. I could not tell you that, except that possibly some of that ore from Buffalo goes down to the Pennsylvania furnaces, but there is not a great amount of that, however.

Mr. BEALL. You mean the furnaces in the State of Pennsylvania?

Mr. FREER. Yes; to the eastern Pennsylvania furnaces; there is a small amount of ore, I think, that goes from Buffalo down there, but how extensive, I don't know.

The CHAIRMAN. Take those docks as you come to them and explain the roads over which the ore is carried. I don't care for all of them.

Mr. YOUNG. You have not mentioned Erie.

Mr. FREER. Erie is on the Pennsylvania.

Mr. YOUNG. That is the next one.

Mr. FREER. The Pennsylvania Co. at Erie; both the Pennsylvania Co. and the Pennsylvania Railroad reach Erie.

Mr. YOUNG. Now Conneaut.

Mr. FREER. Conneaut, the Bessemer & Lake Erie; Ashtabula, the Lake Shore & Michigan Southern.

The CHAIRMAN. Is the ore that is delivered to Conneaut Harbor moved over any other road than the Bessemer & Lake Erie?

Mr. FREER. No, sir.

Mr. YOUNG. What is the road at Ashtabula?

Mr. FREER. The Pennsylvania Co. and the Lake Shore & Michigan Southern Railway. At Fairport, the Baltimore & Ohio; at Cleveland, the Erie and Pennsylvania Co.; at Lorain, the Baltimore & Ohio and the Lorain & West Vigrinia, I believe, are the two roads that handle ore out of Lorain. At Huron, the Wheeling & Lake Erie; at Toledo, the Cincinnati, Hamilton & Dayton and Hocking Valley.

The CHAIRMAN. Where does this ore originate?

Mr. YOUNG. He has not got Sandusky.

Mr. FREER. At Sandusky, the Baltimore & Ohio and the Pennsylvania Co., but the ore movement from Sandusky is very small.

The CHAIRMAN. Is there much ore from Sandusky?

Mr. FREER. No; the large boats are unable to get into the Sandusky Harbor.

Mr. YOUNG. There is not very much at Toledo, either, is there?

Mr. FREER. Not a large amount; they have not a very large territory in which to distribute the ore from Toledo.

The CHAIRMAN. Explain to the committee where this ore originates.

Mr. FREER. It originates in the northwest, in Minnesota, and over here in the old ranges in upper Michigan [indicating on map].

The CHAIRMAN. Explain to the committee, Mr Freer, on the map, the route which the ore takes from the Mesabi Range and from the Vermillion Range to reach Lake Erie ports. Just follow its course.

Mr. FREER. From the Mesabi Range there are three lines, the Great Northern to Superior; the Duluth, Missabe & Northern to Duluth, and the Duluth & Iron Range to Two Harbors. From the Vermillion Range, the Duluth & Iron Range Road to Two Harbors—from Superior and Duluth and Two Harbors down the lake to these various ports here on Lake Erie I have already mentioned.

Mr. GARDNER. What line is it to Superior, the Great Northern?

Mr. FREER. The Great Northern Railway; yes, sir.

Mr. GARDNER. Has not the Duluth, Missabe & Northern a line running into Superior, too?

Mr. FREER. They have handled their ore to Duluth. They have been building—I don't know whether that line is completed—a sort of belt-line around here [indicating] which will come into Superior. Whether it has been completed or not I can not say.

The CHAIRMAN. Now, Mr. Freer, you have explained the course that this ore takes. I wish you would show the committee in a general way to what point this ore goes for consumption, to blast furnaces.

Mr. FREER. There is quite a little of it used right on the lake front at various furnaces in the Buffalo district. There is a furnace at Erie and at Cleveland, Lorain, and Toledo. Then it moves down into the Mahoning and Shenango Valley territory. That is right in here [indicating]. Also into the Pittsburgh district, and down in the Wheeling and Steubenville territory; some little into Zanesville, Columbus, Wellston, and Jackson, in Ohio, and down to the Ashland-Ironton district, along the river here [indicating]. Some comes east of Pittsburgh to Johnstown.

Mr. YOUNG. Some comes to Cleveland, too?

Mr. FREER. Yes; I mentioned the different Lake ports.

Mr. YOUNG. I did not understand you to mention Cleveland?

Mr. FREER. I possibly overlooked it. I said at the Lake ports, and I should have said Cleveland, Lorain, and Toledo.

The CHAIRMAN. Going back to the Mesabi Range, you have stated over what lines this ore passes. Which of these lines are subsidiaries of the United States Steel Corporation? Do you know or do you not?

Mr. FREER. The Duluth, Missabe & Northern and the Duluth & Iron Range.

The CHAIRMAN. Have you any general knowledge of these two lines of railway?

Mr. FREER. Yes; I have a general knowledge of them.

Mr. GARDNER. Have you ever been up there?

Mr. FREER. I never have been; no, sir.

The **Chairman**. I have here a report of the Interstate Commerce Commission on the Duluth, Missabe & Northern Railway.

Mr. **Young**. Is that dated?

The **Chairman**. It is a statement compiled from the annual reports to the Interstate Commerce Commission for the years ending June 30, 1902, to 1911.

I hand you this report of the Duluth, Missabe & Northern. Will you look at it and tell the committee what is the character of the traffic hauled, what commodity constitutes its main traffic, the average length of haul—in other words, explain this exhibit, taken from the reports to the Interstate Commerce Commission, as to what it represents as to the traffic and transportation conditions upon this line. I want you to make an explanation.

Mr. **Reed**. Is not the report the best evidence?

Mr. **Young**. The report shows on its face what it is. I have no particular objection to it, but it seems to me a waste of time for the witness to explain what is in a written report.

The **Chairman**. It is hard for people generally to understand a tabulated statement without explanation.

Mr. **Danforth**. Can we not tell the tonnage and the commodities that are carried as well as he?

The **Chairman**. We might; but these reports are of interest to people who are not so well able to understand technical statements as we may be. I believe we will get a better idea of what the table states if we have an explanation of it.

Just explain that to the committee, Mr. Freer.

Mr. **Freer**. You want me to tell what this report is?

The **Chairman**. Tell what it shows.

Mr. **Freer**. It is a statement of the capital stock, funded debt, mileage, and the operating revenues and expenses of the Duluth, Missabe & Northern—its traffic statistics, the number of tons carried, the average distance carried, the average revenue.

Then on the large sheet accompanying it is a classified statement of the tonnage handled, classifying it by groups of commodities.

You asked me several questions in that one question. I don't know whether I will keep them in my mind or not.

The **Chairman**. What is the character of traffic over that road?

Mr. **Freer**. And you want to know what the principal commodity was?

The **Chairman**. Yes.

Mr. **Freer**. The principal commodity they handle is ore, which constitutes over 90 per cent of their freight traffic.

The **Chairman**. What is the average length of haul?

Mr. **Freer**. It differs for different years.

The **Chairman**. For 1910?

Mr. **Freer**. Practically 77 miles, and their average revenue is practically 72 cents per net ton.

Mr. **Reed**. For 1910.

Mr. **Freer**. Yes, sir; for 1910.

Mr. **Young**. That is for the net tons of ore, or everything?

Mr. **Freer**. For everything.

The statement referred to is in the words and figures following, to wit:

Statement compiled from annual reports of Duluth, Missabe & Northern Ry. Co.[1] *to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.*[2]

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$4,112,500	$4,112,500	$4,112,500	$4,112,500
Funded debt outstanding at end of year	$13,101,000	$13,101,000	$13,101,000	$9,043,000
Single-track mileage owned at end of year, main line	186.84	168.86	168.86	168.86
Single-track mileage owned at end of year, branches and spurs	139.60	127.05	118.17	102.39
Total single-track mileage operated at end of year	328.34	297.81	288.93	273.15
Total operating revenues[3]	$10,233,143.45	$14,055,994.68	$10,124,856.82	$9,389,135.93
Total operating expenses[3]	$4,158,871.72	$4,231,965.54	$3,399,481.69	$3,542,634.40
Total net revenue[3]	$6,074,271.73	$9,824,029.14	$6,725,375.13	$5,846,501.53
Net corporate income	$4,594,876.48	$8,494,097.56	$5,814,212.59	$5,023,286.30
Other disbursements from net corporate income			$90,845.34	
Balance for year carried forward to credit of profit and loss	$4,594,876.48	$8,494,097.56	$5,723,367.25	$5,023,286.30
Dividends declared from surplus	$5,140,625.00	$9,870,000.00	$5,963,125.00	$4,523,750.00
Rate per cent of dividend	125	240	145	110
TRAFFIC AND MILEAGE STATISTICS.				
Passenger traffic:				
1. Number of passengers carried earning revenue	659,912	571,019	512,887	384,363
2. Number of passengers carried 1 mile	24,576,029	21,944,461	18,686,119	15,354,487
3. Number of passengers carried 1 mile per mile of road	78,878	74,674	66,489	59,522
4. Average distance carried (miles)	37.24	38.43	36.43	39.94
5. Total passenger revenue	$482,200.44	$429,899.18	$371,023.00	$306,086.17
6. Average amount received from each passenger (cents)	73,070	75.286	72.340	79.634
7. Average receipts per passenger per mile (cents)	1.962	1.959	1.985	1.993
8. Total passenger service train revenue	$526,021.14	$471,164.59	$402,042.73	$332,892.55
9. Passenger service train revenue per mile of road	$1,688.29	$1,603.31	$1,430.55	$1,290.48
10. Passenger service train revenue per train-mile	$1.45004	$1.37592	$1.26384	$1.38581
Freight traffic:				
11. Number of tons carried of freight-earning revenue	13,625,521	18,695,612	13,388,452	12,587,462
12. Number of tons carried 1 mile	1,006,848,402	1,433,316,149	1,018,743,244	957,744,090
13. Number of tons carried 1 mile per mile of road	3,231,531	4,877,382	3,624,904	3,712,762
14. Average distance haul of 1 ton (miles)	73.89	76.67	76.09	76.08
15. Total freight revenue	$9,561,721.75	$13,452,290.82	$9,593,870.66	$9,004,910.84
16. Average amount received for each ton of freight (cents)	70.175	71.954	71.657	71.538
17. Average receipts per ton per mile (cents)	.949	.939	.942	.940
18. Freight revenue per mile of road	$30,688.83	$45,776.33	$34,137.03	$34,908.16
19. Freight revenue per train-mile	$9.19368	$9.37631	$9.01276	$7.89540
Total traffic:				
20. Operating revenues	$10,123,517.73	$13,966,426.27	$10,022,565.69	$9,365,249.01
21. Operating revenues per mile of road	$32,491.95	$47,525.87	$35,662.41	$36,305.04
22. Operating revenues per train-mile	$7.29730	$8.03725	$7.46655	$6.95534
23. Operating expenses	$4,106,025.12	$4,184,811.19	$3,334,344.94	$3,524,744.28
24. Operating expenses per mile of road	$13,178.49	$14,240.35	$11,864.30	$13,663.91
25. Operating expenses per train-mile	$2.95973	$2.40823	$2.48400	$2.61774
26. Net operating revenue	$6,017,492.61	$9,781,615.08	$6,688,220.75	$5,840,504.73
27. Net operating revenue per mile of road	$19,313.45	$33,285.52	$23,798.11	$22,641.13

28. Average number of passengers per car-mile	20	18	17	61
29. Average number of passengers per train-mile	65	64	59	64
30. Average number of passenger cars per train-mile	4.30	4.33	4.00	3.91
31. Average number of tons of freight per loaded car-mile	42.85	44.29	46.34	43.77
32. Average number of tons of freight per train-mile	968.09	999.03	957.04	839.73
33. Average number of freight cars per train-mile	42.75	44.06	40.17	37.03
34. Average number of loaded cars per train-mile	22.59	22.56	20.65	19.18
35. Average number of empty cars per train-mile	19.19	20.53	18.55	16.88
36. Average mileage operated during year	311.57	293.87	281.04	257.96

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$4,112,500	$4,112,500	$2,512,500	$2,512,500	$2,512,500	$2,512,500
Funded debt outstanding at end of year	$9,043,000	$9,043,000	$8,323,000	$8,323,000	$8,323,000	$8,323,000
Single-track mileage owned at end of year, main line	48.62	48.62	48.62	48.62	48.62	48.62
Single-track mileage owned at end of year, branches and spurs	195.95	190.19	132.35	120.94	112.71	102.33
Total single-track mileage operated at end of year	246.47	187.71	182.87	171.46	163.23	152.85
Total gross earnings from operation	$10,981,893.61	$8,368,489.01	$6,333,817.49	$3,701,416.85	$5,116,530.01	$3,755,416.21
Total operating expenses	$4,215,170.34	$2,977,746.83	$2,283,146.29	$1,836,484.51	$1,901,284.33	$1,476,525.30
Income from operation	$6,766,723.27	$5,390,742.18	$4,050,671.20	$1,864,932.34	$3,215,245.68	$2,278,890.91
Net income	$5,738,686.17	$4,291,706.36	$3,194,934.09	$1,142,431.66	$2,396,655.00	$1,489,283.44
Dividends		[4] $3,403,750.00		$3,768,750.00		$1,507,500.00
Rate per cent of dividend		[5] 110 [6] 40		150.00		60.00
Surplus from operations of year	$5,738,686.17	$887,956.36	$3,194,934.09	[7] $2,626,318.34	$2,396,655.00	[7] $18,216.56
TRAFFIC AND MILEAGE STATISTICS.						
Passenger traffic:						
1. Number of passengers carried earning revenue	273,096	194,168	148,332	148,906	126,008	76,014
2. Number of passengers carried 1 mile	11,278,072	7,750,264	6,055,314	6,473,123	5,584,144	3,031,406
3. Number of passengers carried 1 mile per mile of road	47,387	41,288	33,113	37,753	34,210	19,832
4. Average distance carried (miles)	41.30	39.92	40.82	43.47	44.32	39.88
5. Total passenger revenue	$284,747.00	$206,775.37	$156,930.16	$170,428.32	$157,141.56	$90,878.26
6. Average amount received from each passenger	$1.04266	$1.06493	$1.05797	$1.14454	$1.24707	$1.19555
7. Average receipts per passenger per mile (cents)	2.524	2.668	2.591	2.633	2.814	2.998
8. Total passenger earnings	$313,625.28	$228,489.72	$172,463.44	$186,226.97	$168,929.92	$100,814.62
9. Passenger earnings per mile of road	$1,317.75	$1,217.25	$943.09	$1,086.13	$1,034.92	$659.57
10. Passenger earnings per train-mile	$1.56345	$1.34851	$1.01807	$1.08816	$1.05814	$1.02745

[1] The annual reports of this company for the year 1908 and subsequent years indicate that it was controlled by Lake Superior consolidated iron mines; this information was not given or called for in reports for prior years. The annual reports do not indicate that the Duluth, Missabe & Northern Ry. Co. controlled any other transportation companies or operated such companies.

[2] For some items the figures shown for 1908 and subsequent years are not fully comparable with those shown for 1907 and prior years, because of changes in classifications and report forms.

[3] Includes data for "Outside operations" which were not returned as separate items for years prior to 1908. The percentage of outside operations to rail operations was not over 2 per cent for any of the 4 years.

[4] Represents a dividend of $70 per share on 25,125 shares and a dividend of $40 per share on 41,125 shares.

[5] On 25,125 shares.

[6] On 16,000 shares.

[7] Represents deficit.

Statement compiled from annual reports of Duluth, Missabe & Northern Ry. Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1907	1906	1905	1904	1903	1902
Freight traffic:						
11. Number of tons carried of freight earning revenue	14,742,137	11,324,817	9,095,746	4,915,374	6,809,384	5,008,428
12. Number of tons carried 1 mile	1,145,026,645	863,589,409	646,568,568	348,074,277	491,641,357	368,146,033
13. Number of tons carried 1 mile per mile of road	4,811,036	4,600,657	3,535,673	2,030,061	3,011,955	2,408,544
14. Average distance haul of 1 ton (miles)	77.67	76.25	71.08	70.81	72.20	73.51
15. Total freight revenue	$10,608,974.62	$8,114,623.00	$6,134,579.62	$3,500,428.11	$4,934,491.55	$3,633,306.01
16. Average amount received for each ton of freight (cents)	71.963	71.653	67.444	71.214	72.466	72.544
17. Average receipts per ton per mile (cents)	.926	.939	.949	1.006	1.004	.987
18. Total freight earnings	$10,611,486.50	$8,116,571.50	$6,134,579.62	$3,500,428.11	$4,934,491.55	$3,633,306.01
19. Freight earnings per mile of road	$44.586.07	$43,239.95	$33,546.12	$20,415.42	$30,230.30	$23,770.40
20. Freight earnings per train-mile	$8.20379	$8.39384	$7.90707	$7.08748	$6.65650	$7.06392
Total traffic:						
21. Gross earnings from operation	$10,981,893.61	$8,368,489.01	$6,333,817.49	$3,701,416.85	$5,116,530.01	$3,755,416.21
22. Gross earnings from operation per mile of road	$46,142.41	$44,582.01	$34,635.63	$21,587.64	$31,345.52	$24,569.29
23. Gross earnings from operation per train-mile	$7.62066	$7.61445	$6.96576	$5.91024	$5.95369	$6.63661
24. Operating expenses	$4,215,170.34	$2,977,746.83	$2,283,146.29	$1,836,484.51	$1,901,284.33	$1,476,525.30
25. Operating expenses per mile of road	$17,710.80	$15,863.55	$12,485.08	$10,710.86	$11,647.88	$9,659.96
26. Operating expenses per train-mile	$2.92503	$2.70944	$2.51094	$2.93241	$2.21237	$2.60933
27. Income from operation	$6,766,723.27	$5,390,742.18	$4,050,671.20	$1,864,932.34	$3,215,245.68	$2,278,890.91
28. Income from operation per mile of road	$28,431.61	$28,718.46	$22,150.55	$10,876.78	$19,697.64	$14,909.33
Car mileage, etc.:						
30. Average number of passenger cars per train-mile	3.74	4.12	3.80	3.09	3.04	2.92
31. Average number of passengers per train-mile	56	46	36	38	35	31
36. Average number of freight cars per train-mile	41.26	44.65	46.38	42.53	41.52	46.15
37. Average number of loaded cars per train-mile	21.44	23.16	23.70	22.00	21.39	23.69
38. Average number of empty cars per train-mile	19.82	21.49	22.68	20.53	20.13	22.46
39. Average number of tons of freight per train-mile	885.22	893.09	833.38	704.76	663.21	715.75
40. Average number of tons of freight per loaded car-mile	41.29	38.56	35.16	32.03	31.00	30.21
41. Average mileage operated during year	238.00	187.71	182.87	171.46	163.23	152.85

Statement showing freight traffic movement (company's material excluded), compiled from annual reports of Duluth, Missabe & Northern Ry. Co. to the Interstate Commerce Commission, for the years ending June 30, 1911 to 1902.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF AGRICULTURE.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Grain:										
Freight originating on this road	2,529	2,990	2,184	....	2,224	2,082	1,452	1,947	1,946	1,564
Freight received from connecting roads and other carriers	3,592	3,778	2,302	2,667	1,527	707	411	650	919	611
Total freight tonnage	6,121	6,768	4,486	2,667	3,751	2,789	1,863	2,597	2,865	2,175
Flour:										
Freight originating on this road	2,458	2,527	2,377	1,667	1,872	1,531	1,268	1,223	1,758	1,472
Freight received from connecting roads and other carriers	1,706	1,553	1,729	1,499	804	343	368	297	357	383
Total freight tonnage	4,164	4,080	4,106	3,166	2,676	1,874	1,636	1,520	2,115	1,855
Other mill products:										
Freight originating on this road	1,146	914	322	1,350	2,922	2,553	1,788	2,210	2,249	1,234
Freight received from connecting roads and other carriers	1,833	840	291	2,891	1,508	242	333	388	316	295
Total freight tonnage	2,979	1,754	613	4,241	4,430	2,795	2,121	2,598	2,565	1,529
Hay:										
Freight originating on this road	6,176	6,500	3,836	....	5,079	4,303	2,972	4,074	3,300	3,385
Freight received from connecting roads and other carriers	4,170	3,563	4,531	6,250	1,923	918	1,106	1,885	1,698	1,135
Total freight tonnage	10,346	10,063	8,367	6,250	7,002	5,221	4,078	5,959	4,998	4,520
Tobacco:										
Freight originating on this road	....	....	....	....	21	77	51	44	71	59
Freight received from connecting roads and other carriers	22	....	....	48	15	20	10	13	19	20
Total freight tonnage	22	....	....	48	36	97	61	57	90	79
Fruit and vegetables:										
Freight originating on this road	2,598	3,004	1,780	5	1,941	3,360	2,206	2,677	3,437	2,287
Freight received from connecting roads and other carriers	1,807	906	755	2,600	693	642	239	171	451	330
Total freight tonnage	4,405	3,910	2,535	2,605	2,634	4,002	2,445	2,848	3,888	2,617

Statement showing freight traffic movement (company's material excluded), compiled from annual reports of Duluth, Missabe & Northern Ry Co. to the Interstate Commerce Commission, for the years ending June 30, 1911 to 1902—Continued.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF AGRICULTURE—continued.										
Other products of agriculture:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Freight originating on this road	81	65	158	....	....	....	....	....	....	....
Freight received from connecting roads and other carriers	376	75	102	....	....	....	....	....	....	....
Total freight tonnage	457	140	260	....	....	....	....	....	....	....
Total:										
Freight originating on this road	14,988	16,000	10,657	3,022	14,059	....	....	....	....	....
Freight received from connecting roads and other carriers	13,506	10,715	9,710	15,955	6,470	....	....	....	....	....
Total freight tonnage	28,494	26,715	20,367	18,977	20,529	....	....	....	....	....
PRODUCTS OF ANIMALS.										
Live stock:										
Freight originating on this road	553	574	515	98	1,160	1,692	613	340	464	586
Freight received from connecting roads and other carriers	521	341	550	1,206	615	303	384	367	1,340	220
Total freight tonnage	1,074	915	1,065	1,304	1,775	1,995	997	707	1,804	806
Dressed meats:										
Freight originating on this road	488	300	604	....	258	1,170	1,119	1,445	2,086	788
Freight received from connecting roads and other carriers	317	503	343	735	217	61	51	16	18	52
Total freight tonnage	805	803	947	735	475	1,231	1,170	1,461	2,104	840
Other packing-house products:										
Freight originating on this road	16	457	301	....	250	1,079	1,005	1,054	935	401
Freight received from connecting roads and other carriers	315	175	50	479	153	61	49	32	9	23
Total freight tonnage	331	632	351	479	403	1,140	1,054	1,086	944	424
Poultry, game, and fish:										
Freight originating on this road	....	128	....	9	10	84	64	67	69	44
Freight received from connecting roads and other carriers	1,403	881	734	85	15	35	9	12	4	5
Total freight tonnage	1,403	1,009	734	94	25	119	73	79	73	49

Wool:										
Freight received from connecting roads and other carriers	13	12	....	....	....	....	....	....	....	....
Hides and leather:										
Freight originating on this road	24	70	....	17	2	42	53	48	43	21
Freight received from connecting roads and other carriers	287	526	43	9	8	18	15	10	4	2
Total freight tonnage	311	596	43	26	10	60	68	58	47	23
Other products of animals:										
Freight originating on this road	....	19	....	....	....	....	....	....	....	....
Freight received from connecting roads and other carriers	251	263	....	....	....	....	....	....	....	....
Total freight tonnage	251	282	....	....	....	....	....	....	....	....
Total:										
Freight originating on this road	1,081	1,548	1,420	124	1,680	....	....	....	....	....
Freight received from connecting roads and other carriers	3,107	2,701	1,720	2,514	1,008	....	....	....	....	....
Total freight tonnage	4,188	4,249	3,140	2,638	2,688	....	....	....	....	....
PRODUCTS OF MINES.										
Anthracite coal:										
Freight originating on this road	....	....	....	....	20	....	4,340	3,848	1,421	2,423
Freight received from connecting roads and other carriers	10,123	11,253	12,862	12,738	8,956	5,391	136	145	35	....
Total freight tonnage	10,123	11,253	12,862	12,738	8,976	5,391	4,476	3,993	1,456	2,423
Bituminous coal:										
Freight originating on this road	....	....	....	....	2,816	....	104,177	71,933	69,676	49,375
Freight received from connecting roads and other carriers	466,124	399,272	342,658	313,601	280,616	177,309	8,605	987	1,233	403
Total freight tonnage	466,124	399,272	342,658	313,601	283,432	177,309	112,782	72,920	70,909	49,778
Coke:										
Freight originating on this road	....	17	....	30	....	....	....	....	....	....
Freight received from connecting roads and other carriers	895	691	....	520	....	....	....	....	....	....
Total freight tonnage	895	708	....	550	....	....	....	....	....	....
Ores:										
Freight originating on this road	12,289,601	17,292,072	12,197,822	11,675,970	13,634,772	10,405,490	8,560,850	4,357,273	6,376,465	4,755,067
Freight received from connecting roads and other carriers	....	40	....	....	....	....	....	....	....	....
Total freight tonnage	12,289,601	17,292,112	12,197,822	11,675,970	13,634,772	10,405,490	8,560,850	4,357,273	6,376,465	4,755,067

Statement showing freight traffic movement (company's material excluded), compiled from annual reports of Duluth, Missabe & Northern Ry. Co. to the Interstate Commerce Commission, for the years ending June 30, 1911 to 1902—Continued.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF MINES—continued.										
Stone, sand, and other like articles:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Freight originating on this road	23,683	20,962	67,351	33,203	24,174	13,826	17,624	16,257	150	131
Freight received from connecting roads and other carriers	3,106	1,749	893	541	1,423	1,147	2,232	....	163	15
Total freight tonnage	26,789	22,711	68,244	33,744	25,597	14,973	19,856	16,257	313	146
Other products of mines:										
Freight originating on this road	34	111	447	....	....	....	....	....	....	....
Freight received from connecting roads and other carriers	1,275	192	245	....	....	....	....	....	....	....
Total freight tonnage	1,309	303	692	....	....	....	....	....	....	....
Total:										
Freight originating on this road	12,313,318	17,313,162	12,265,620	11,709,203	13,661,782	....	....	....	....	....
Freight received from connecting roads and other carriers	481,523	413,197	356,658	327,400	290,995	....	....	....	....	....
Total freight tonnage	12,794,841	17,726,359	12,622,278	12,036,603	13,952,777	....	....	....	....	....
Ore (percentage of total tonnage)	90.19	92.49	90.36	92.75	92.48	91.88	94.12	88.64	93.64	94.94
PRODUCTS OF FORESTS.										
Lumber:										
Freight originating on this road	27,002	63,727	22,099	12,730	29,473	[1] 62,119	[1] 44,792	[1] 31,019	[1] 5,036	[1] 4,311
Freight received from connecting roads and other carriers	177,806	151,719	131,659	107,867	134,725	[1] 164,192	[1] 113,511	[1] 16,167	[1] 4,211	[1] 2,518
Total freight tonnage	204,808	215,446	153,758	120,597	164,198	[1] 226,311	[1] 158,303	[1] 47,186	[1] 9,247	[1] 6,829
Other products of forests:										
Freight originating on this road	242,818	209,025	177,281	283,679	373,788	[2] 371,821	[3] 116,560	[3] 263,285	[3] 255,067	[3] 150,634
Freight received from connecting roads and other carriers	98,903	265,984	257,744	31,519	108,202	[2] 3,170	[3] 44,748	[3] 90,957	[3] 22,897	[3] 335
Total freight tonnage	341,721	475,009	435,025	315,198	481,990	[2] 374,991	[3] 161,308	[3] 354,242	[3] 277,964	[3] 150,969

Total:										
Freight originating on this road	269,820	272,752	199,380	296,409	403,261	....	....	....	....	....
Freight received from connecting roads and other carriers	276,709	417,703	389,403	139,386	242,927	....	....	....	....	....
Total freight tonnage	546,529	690,455	588,783	435,795	646,188	....	....	....	....	....
MANUFACTURERS.										
Petroleum and other oils:										
Freight originating on this road	176	982	358	....	230	22	194	226	340	359
Freight received from connecting roads and other carriers	7,416	5,839	4,716	3,786	2,726	2,101	1,110	1,028	1,322	685
Total freight tonnage	7,592	6,821	5,074	3,786	2,956	2,123	1,304	1,254	1,662	1,044
Sugar:										
Freight originating on this road	....	18	18	....	329	527	490	475	609	440
Freight received from connecting roads and other carriers	27	167	....	385	98	141	62	64	46	51
Total freight tonnage	27	185	18	385	427	668	552	539	655	491
Naval stores:										
Freight received from connecting roads and other carriers	38	20	....	....	....	....	....	....	....	....
Iron, pig and bloom:										
Freight originating on this road	2,669	1,043	206	....	....	....	....	....	....	....
Freight received from connecting roads and other carriers	1,627	1,249	291	....	....	....	....	....	....	....
Total freight tonnage	4,296	2,292	497	....	....	....	....	....	....	....
Iron and steel rails:										
Freight originating on this road	2,639	7,342	2,602	....	2,404	....	3,582	169	1,351	630
Freight received from connecting roads and other carriers	17,456	10,047	6,989	11,321	19,798	23,399	8,077	1,426	5,308	2,779
Total freight tonnage	20,095	17,389	9,591	11,321	22,202	23,399	11,659	1,595	6,659	3,409
Other castings and machinery:										
Freight originating on this road	8,942	6,873	8,378	184	9,672	15,539	5,757	3,944	3,784	2,638
Freight received from connecting roads and other carriers	9,148	9,528	6,200	16,272	13,255	4,914	4,570	2,570	3,139	1,348
Total freight tonnage	18,090	16,401	14,578	16,456	22,927	20,453	10,327	6,514	6,923	3,986

[1] Includes laths and shingles.

[2] Represents logs and piling, ties, posts, cord and pulp wood.

[3] Represents logs and piling, ties, posts, and wood.

Statement showing freight traffic movement (company's material excluded), compiled from annual reports of Duluth, Missabe & Northern Ry. Co. to the Interstate Commerce Commission, for the years ending June 30 1911, to 1902—Continued.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
MANUFACTURES—continued.										
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons*	*Tons.*	*Tons.*
Bar and sheet metal:										
Freight originating on this road	222	1,188	83	1,279	2,918	867	285	275	325	591
Freight received from connecting roads and other carriers	2,678	7,518	1,400	2,965	2,833	451	88	51	155	170
Total freight tonnage	2,900	8,706	1,483	4,244	5,751	1,318	373	326	480	761
Cement, brick, and lime:										
Freight originating on this road	7,851	9,825	4,542		6,902	5,508	1,308	1,569	1,597	808
Freight received from connecting roads and other carriers	10,342	12,800	8,409	11,796	8,776	2,146	1,753	1,925	3,177	838
Total freight tonnage	18,193	22,625	12,951	11,796	15,678	7,654	3,061	3,494	4,774	1,046
Agricultural implements:										
Freight originating on this road	160	67								
Freight received from connecting roads and other carriers	1,033	169	105							
Total freight tonnage	1,193	236	105							
Wagons, carriages, tools, etc.:										
Freight originating on this road	30	48	206		273	430	352	292	274	393
Freight received from connecting roads and other carriers	126	132	222	318	172	108	141	127	66	75
Total freight tonnage	156	180	428	318	445	538	493	419	340	468
Wines, liquors, and beers:										
Freight originating on this road	11,504	10,857	7,783	6,971	6,393	5,045	3,539	3,789	4,407	2,946
Freight received from connecting roads and other carriers	2,865	3,011	3,789	4,395	3,857	1,875	2,181	2,248	2,317	1,713
Total freight tonnage	14,369	13,868	11,572	11,366	10,250	6,920	5,720	6,037	6,724	4,659
Household goods and furniture:										
Freight originating on this road	1,009	723	889	396	781	566	445	434	669	588
Freight received from connecting roads and other carriers	1,114	484	519	632	540	274	231	351	603	212
Total freight tonnage	**2,123**	**1,207**	**1,408**	**1,028**	**1,321**	**840**	**676**	**785**	**1,272**	**800**

Other manufactures:										
Freight originating on this road	12,782	4,045	1,377	2,860	360	....	....	....	....	....
Freight received from connecting roads and other carriers	25,474	17,036	5,815	18,096	4,681	....	....	....	....	....
Total freight tonnage	38,256	21,081	7,192	20,956	5,041	....	....	....	....	....
Total:										
Freight originating on this road	47,984	43,011	26,442	11,690	30,262	....	....	....	....	....
Freight received from connecting roads and other carriers	79,344	68,000	38,455	69,966	56,736	....	....	....	....	....
Total freight tonnage	127,328	111,011	64,897	81,656	86,998	....	....	....	....	....
Merchandise:										
Freight originating on this road	60,399	63,250	34,305	3,715	5,620	10,990	7,061	5,618	4,941	975
Freight received from connecting roads and other carriers	22,802	23,466	16,664	3,581	3,426	2,293	3,508	1,787	1,688	314
Total freight tonnage	83,201	86,716	50,969	7,296	9,046	13,283	10,569	7,405	6,629	1,289
Miscellaneous—Other commodities not mentioned above:										
Freight originating on this road	29,818	36,273	24,982	1,120	19,125	13,916	14,999	11,940	10,879	7,693
Freight received from connecting roads and other carriers	11,122	13,834	13,036	3,377	4,786	7,917	2,872	4,225	4,540	2,053
Total freight tonnage	40,940	50,107	38,018	4,497	23,911	21,833	17,871	16,165	15,419	9,746
Total tonnage:										
Freight originating on this road	12,737,408	17,745,996	12,562,806	12,025,283	14,135,789	10,924,639	8,898,946	4,787,475	6,753,349	4,991,843
Freight received from connecting roads and other carriers	888,113	949,616	825,646	562,179	606,348	400,178	196,800	127,899	56,035	16,585
Total freight tonnage	13,625,521	18,695,612	13,388,452	12,587,462	14,742,137	11,324,817	9,095,746	4,915,374	6,809,384	5,008,428

The CHAIRMAN. I hand you another statement from the Interstate Commerce Commission reports covering the operation, the capitalization, and so forth, of the Duluth & Iron Range for the same period and ask you to make a similar explanation concerning it.

Mr. FREER. It is a similar report for the Duluth & Iron Range Road. Do you want the figures for 1910?

The CHAIRMAN. Yes.

Mr. FREER. In 1910 ore constituted 89.11 per cent of its freight traffic. The average distance hauled was 66.11 miles. The average revenue was 70⅔ cents a net ton, the average of all traffic.

The CHAIRMAN. What was the distance the ore was hauled over these roads to Duluth or Lake Superior?

Mr. FREER. The Duluth, Missabe & Northern distance was between 75 and 80 miles on an average. That is to Duluth. The Duluth & Iron Range haul to Two Harbors would be something less than that, possibly about 70 miles. That would be a fair average, I think.

The CHAIRMAN. What is the rate at which that ore was hauled at the time these sheets were made?

Mr. FREER. I don't know when these sheets were made. The present rate is 60 cents per gross ton. It has been 60 cents per gross ton since the 30th of November.

The CHAIRMAN. What was it prior to that time?

Mr. FREER. It was 80 cents from the Mesabi Range. They had two rates, one 90 cents and one $1 from the Vermillion Range.

The statement referred to is in the words and figures following, to wit:

Statement compiled from annual reports of the Duluth & Iron Range R. R. Co.[1] *to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.*[2]

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$3,000,000	$3,000,000	$3,000,000	$3,000,000
Funded debt outstanding at end of year	$13,151,000	$13,151,000	$13,151,000	$13,151,000
Single-track mileage owned at end of year, main line	190.88	168.45	167.78	167.78
Single-track mileage owned at end of year, branches and spurs	71.73	63.02	56.03	61.51
Total single-track mileage operated at end of year	263.41	232.27	224.61	230.09
Total operating revenues[3]	$7,430,835.08	$9,597,773.83	$6,915,368.92	$6,267,821.48
Total operating expenses[3]	$3,211,358.42	$3,540,742.42	$2,695,276.24	$2,765,252.10
Total net revenue[3]	$4,219,476.66	$6,057,031.41	$4,220,092.68	$3,502,569.38
Net corporate income	$3,098,558.81	$4,438,651.04	$2,864,028.04	$2,284,645.42
Other disbursements from net corporate income			$76,051.41	$217,182.98
Balance for year carried forward to credit of profit and loss	$3,098,558.81	$4,438,651.04	$2,788,876.63	$2,067,462.44
Dividends declared from surplus	$4,050,000.00	$3,000,000.00	$4,350,000.00	$3,600,000.00
Rate per cent of dividend	135	100	145	120
TRAFFIC AND MILEAGE STATISTICS.				
Passenger traffic:				
1. Number of passengers carried earning revenue	554,145	548,253	460,629	486,265
2. Number of passengers carried 1 mile	15,835,437	14,396,117	12,068,385	13,896,950
3. Number of passengers carried 1 mile per mile of road	60,117	62,194	53,922	60,608
4. Average distance carried (miles)	28.58	26.26	26.20	28.58
5. Total passenger revenue	$308,940.57	$275,913.81	$227,643.53	$266,405.13
6. Average amount received from each passenger (cents)	55.750	50.326	49.420	54.786
7. Average receipts per passenger per mile (cents)	1.951	1.916	1.886	1.917
8. Total passenger service train revenue	$337,386.27	$304,287.77	$252,371.64	$292,526.45
9. Passenger service train revenue per mile of road	$1,280.84	$1,314.59	$1,127.62	$1,275.79
10. Passenger service train revenue per train-mile	$1.29042	$1.25377	$0.95673	$1.10322
Freight traffic:				
11. Number of tons carried of freight-earning revenue	9,939,510	12,965,080	9,263,402	8,315,955
12. Number of tons carried 1 mile	642,620,747	857,184,977	611,894,954	554,264,762
13. Number of tons carried 1 mile per mile of road	2,447,054	3,703,223	2,733,993	2,417,309
14. Average distance haul of 1 ton (miles)	64.65	66.11	66.06	66.65
15. Total freight revenue	$6,935,995.96	$9,161,926.78	$6,538,819.81	$5,854,676.41
16. Average amount received for each ton of freight (cents)	69.782	70.666	70.588	70.403
17. Average receipts per ton per mile (cents)	1.079	1.069	1.069	1.056
18. Freight revenue per mile of road	$26,411.77	$39,581.49	$29,215.94	$25,533.94
19. Freight revenue per train-mile	$6.84504	$7.08854	$7.11852	$6.24676

[1] The annual reports of this company for the year 1908 and subsequent years indicate that it was controlled by Minnesota Iron Co.; this information was not given or called for in reports for prior years. The annual reports do not indicate that the Duluth & Iron Range Railroad Co. controlled any other transportation companies or operated such companies.

[2] For some items the figures shown for 1908 and subsequent years are not fully comparable with those shown for 1907 and prior years, because of changes in classifications and report forms.

[3] Includes data for "Outside operations" which were not returned as separate items for years prior to 1908. The percentage of outside operations to rail operations was not over 3 per cent for any of the four years.

Statement compiled from annual reports of the Duluth & Iron Range R. R. Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Items.	1911	1910	1909	1908
TRAFIC AND MILEAGE STATISTICS—continued.				
Total traffic:				
20. Operating revenues	$7,362,572.58	$9,530,101.46	$6,848,726.58	$6,207,509.48
21. Operating revenues per mile of road	$28,036.15	$41,172.08	$30,600.63	$27,072.74
22. Operating revenues per train-mile	$5.86900	$6.22722	$5.89963	$5.26885
23. Operating expenses	$3,139,542.66	$3,483,453.86	$2,638,240.25	$2,696,992.81
24. Operating expenses per mile of road	$11,955.15	$15,049.27	$11,787.86	$11,762.37
25. Operating expenses per train-mile	$2.50265	$2.27618	$2.27263	$2.28917
26. Net operating revenue	$4,223,029.92	$6,046,647.60	$4,210,486.33	$3,510,516.67
27. Net operating revenue per mile of road	$16,080.99	$26,122.81	$18,812.77	$15,310.38
28. Average number of passengers per car-mile	16	14	15	14
29. Average number of passengers per train-mile	61	59	46	52
30. Average number of passenger cars per train-mile	4.80	5.16	3.74	3.76
31. Average number of tons of freight per loaded car-mile	39.18	41.85	40.35	38.46
32. Average number of tons of freight per train-mile	634.19	663.20	666.14	591.38
33. Average number of freight cars per train-mile	31.77	31.38	31.68	30.40
34. Average number of loaded cars per train-mile	16.19	15.85	16.51	15.38
35. Average number of empty cars per train-mile	14.60	14.53	14.20	14.03
36. Average mileage operated during year	262.61	231.47	223.81	229.29

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000
Funded debt outstanding at end of year	$11,232,000	$11,232,000	$11,232,000	$11,232,000	$11,232,000	$11,232,000
Single-track mileage owned at end of year, main line	161.06	161.06	161.06	161.06	161.06	152.56
Single-track mileage owned at end of year, branches and spurs	49.20	50.63	49.77	49.77	48.48	57.39
Total single-track mileage operated at end of year	211.06	212.49	211.63	211.63	210.34	210.75
Total gross earnings from operation	$8,171,484.00	$7,757,635.88	$6,710,681.84	$4,033,215.83	$6,031,878.90	$5,934,868.25
Total operating expenses	$3,274,320.66	$2,575,317.07	$2,224,444.97	$1,839,014.81	$2,252,635.07	$2,155,234.49
Income from operation	$4,897,163.34	$5,182,318.81	$4,486,236.87	$2,164,201.02	$3,779,243.83	$3,779,633.76
Net income	$3,435,897.33	$3,778,038.09	$3,169,333.11	$1,032,047.75	$2,566,170.55	$2,613,403.67
Dividends		$3,150,000.00		$4,500,000.00		$1,800,000.00
Rate per cent of dividend		105		150		60
Surplus from operations of year	$3,435,897.33	$628,038.09	$3,169,333.11	$3,467,952.25	$2,566,170.55	$813,403.67
TRAFFIC AND MILEAGE STATISTICS.						
Passenger traffic:						
1. Number of passengers carried earning revenue	329,012	263,907	204,000	221,813	227,195	193,783
2. Number of passengers carried 1 mile	10,449,233	9,312,088	7,238,503	7,986,784	8,340,272	7,254,559
3. Number of passengers carried 1 mile per mile of road	49,697	43,989	34,333	37,883	39,803	34,555
4. Average distance carried (miles)	31.76	35.29	35.48	36.01	36.71	37.44

5. Total passenger revenue	$267,551.17	$242,704.97	$193,578.05	$211,628.42	$239,382.59	$203,508.91
6. Average amount received from each passenger (cents)	81.320	91.966	94.891	95.408	105.364	105.019
7. Average receipts per passenger per mile (cents)	2.560	2.606	2.674	2.650	2.870	2.805
8. Total passenger earnings	$295,963.17	$268,436.45	$217,424.23	$239,554.80	$261,325.02	$222,571.97
9. Passenger earnings per mile of road	$1,407.61	$1,268.06	$1,031.28	$1,136.25	$1,247.15	$1,060.17
10. Passenger earnings per train-mile	$1.32939	$1.33501	$1.07286	$1.17313	$1.29517	$1.17921
Freight traffic:						
11. Number of tons carried of freight earning revenue	10,619,043	10,418,488	8,933,106	5,278,380	7,890,615	7,734,178
12. Number of tons carried 1 mile	754,244,350	691,319,024	605,658,334	345,960,465	547,727,211	545,950,166
13. Number of tons carried 1 mile per mile of road	3,587,198	3,265,714	2,872,733	1,640,945	2,613,976	2,600,506
14. Average distance haul of 1 ton (miles)	71.03	66.36	67.80	65.54	69.42	70.59
15. Total freight revenue	$7,790,578.34	$7,439,996.16	$6,451,111.51	$3,730,709.51	$5,728,450.99	$5,684,464.03
16. Average amount received for each ton of freight (cents)	73.364	71.411	72.216	70.679	72.598	73.498
17. Average receipts per ton per mile (cents)	1.033	10.76	1.065	1.078	1.046	1.041
18. Total freight earnings	$7,790,578.34	$7,439,996.16	$6,451,111.51	$3,730,709.51	$5,728,450.99	$5,684,464.03
19. Freight earnings per mile of road	$37,052.12	$35,145.71	$30,598.64	$17,695.34	$27,338.48	$27,076.61
20. Freight earnings per train-mile	$6.63674	$6.43350	$6.08740	$5.59809	$6.47895	$6.01722
Total traffic:						
21. Gross earnings from operation	$8,171,484.00	$7,757,635.88	$6,710,681.84	$4,003,215.83	$6,031,878.90	$5,934,868.25
22. Gross earnings from operation per mile of road	$38,863.71	$36,646.21	$31,829.82	$18,987.89	$28,786.56	$28,269.35
23. Gross earnings from operation per train-mile	$5.91164	$5.74636	$5.34760	$4.64012	$5.59380	$5.30686
24. Operating expenses	$3,274,320.66	$2,575,317.07	$2,224,444.97	$1,839,014.81	$2,252,635.07	$2,155,234.49
25. Operating expenses per mile of road	$15,572.72	$12,165.51	$10,550.89	$8,722.74	$10,750.48	$10,265.95
26. Operating expenses per train-mile	$2.36880	$1.90763	$1.77261	$2.13160	$2.08903	$1.94896
27. Income from operation	$4,897,163.34	$5,182,318.81	$4,486,236.87	$2,164,201.02	$3,779,243.83	$3,779,633.76
28. Income from operation per mile of road	$23,290.99	$24,480.70	$21,278.93	$10,265.15	$18,036.08	$18,003.40
Car mileage, etc.:						
30. Average number of passenger cars per train-mile	3.99	3.63	3.56	3.35	3.56	3.03
31. Average number of passengers per train-mile	47	46	36	39	41	38
36. Average number of freight cars per train-mile	33.94	35.69	36.54	33.97	40.38	39.05
37. Average number of loaded cars per train-mile	17.90	18.86	19.38	17.74	21.41	20.87
38. Average number of empty cars per train-mile	16.04	16.83	17.16	16.23	18.97	18.17
39. Average number of tons of freight per train-mile	642.54	597.80	571.51	519.13	619.49	577.91
40. Average number of tons of freight per loaded car-mile	35.90	31.69	29.49	29.27	28.93	27.68
41. Average mileage operated during year	210.26	211.69	210.83	210.83	209.53	209.94

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[1] Represents deficit.

Statement showing freight traffic movement (company's material excluded), compiled from annual reports of the Duluth & Iron Range R. R. Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF AGRICULTURE.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Grain:										
Freight originating on this road	3,662	32		28	24	29	79	171	79	43
Freight received from connecting roads and other carriers	1,888	5,508	4,748	5,201	6,319	6,472	5,551	5,009	5,667	4,936
Total freight tonnage	5,550	5,540	4,748	5,229	6,343	6,501	5,630	5,180	5,746	4,979
Flour:										
Freight originating on this road	1,171				42	27				43
Freight received from connecting roads and other carriers	1,012	2,754	2,900	2,924	3,019	2,581	2,151	3,066	2,916	3,026
Total freight tonnage	2,183	2,754	2,900	2,924	3,061	2,608	2,151	3,066	2,916	3,069
Other mill products:										
Freight originating on this road	2,787	28	58	24	15	13	14	16	29	10
Freight received from connecting roads and other carriers	2,408	3,906	3,816	3,872	4,387	3,073	2,411	3,637	3,403	3,445
Total freight tonnage	5,195	3,934	3,874	3,896	4,402	3,086	2,425	3,653	3,432	3,455
Hay:										
Freight originating on this road	9,238	221	140	347	364	193	189	103	474	188
Freight received from connecting roads and other carriers	3,285	11,575	10,710	11,583	12,120	12,407	10,580	11,987	10,635	8,557
Total freight tonnage	12,523	11,796	10,850	11,930	12,484	12,600	10,769	12,090	11,109	8,745
Fruit and vegetables:										
Freight originating on this road	1,119	77	87	30	12	59	60	54	67	74
Freight received from connecting roads and other carriers	460	2,063	1,998	2,342	2,947	2,381	1,497	1,926	2,604	2,323
Total freight tonnage	1,579	2,140	2,085	2,372	2,959	2,440	1,557	1,980	2,671	2,397
Total:										
Freight originating on this road	17,977	358	285	429	457					
Freight received from connecting roads and other carriers	9,053	25,806	24,172	25,922	28,792					
Total freight tonnage	27,030	26,164	24,457	26,351	29,249					

PRODUCTS OF ANIMALS.										
Live stock:										
Freight originating on this road	1,469	676	380	612	1,164	676	782	782	983	455
Freight received from connecting roads and other carriers	1,163	1,194	1,243	1,561	2,030	2,289	1,678	1,077	1,671	1,134
Total freight tonnage	2,632	1,870	1,623	2,173	3,194	2,965	2,460	1,859	2,654	1,589
Dressed meats:										
Freight originating on this road	446		20		10				8	15
Freight received from connecting roads and other carriers	129	231	209	333	534	1,219	968	1,325	1,162	1,306
Total freight tonnage	575	231	229	333	544	1,219	968	1,325	1,170	1,321
Other packing-house products:										
Freight originating on this road							20			
Freight received from connecting roads and other carriers			43	121	93	256	362	169	205	189
Total freight tonnage			43	121	93	256	382	169	205	189
Poultry, game, and fish:										
Freight originating on this road	63	39	59	229			10			
Total:										
Freight originating on this road	1,978	715	459	841	1,174					
Freight received from connecting roads and other carriers	1,292	1,425	1,495	2,015	2,657					
Total freight tonnage	3,270	2,140	1,954	2,856	3,831					
PRODUCTS OF MINES.										
Anthracite coal:										
Freight received from connecting roads and other carriers	15,768	14,951	11,856	12,831	12,389	9,679	7,196	5,407	3,282	8,251
Bituminous coal:										
Freight received from connecting roads and other carriers	232,381	210,221	227,294	191,010	188,840	140,937	121,131	73,352	110,007	98,867
Coke:										
Freight received from connecting roads and other carriers	214	67			101					
Ores:										
Freight originating on this road	7,958,595	11,317,206	7,944,730	6,827,041	9,269,415	8,758,269	7,613,425	3,890,097	6,349,163	6,386,300

Statement showing freight traffic movement (company's material excluded), compiled from annual reports of the Duluth & Iron Range R. R. Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Items.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF MINES—continued.										
Stone, sand, and other like articles:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Freight originating on this road	12,364	8,539	10,984	7,725	8,496	5,054	2,301	857	912	330
Freight received from connecting roads and other carriers	1,199	3,070	2,548	4,530	2,182	4,459	917	338	249	210
Total freight tonnage	13,563	11,609	13,532	12,255	10,678	9,513	3,218	1,195	1,161	540
Total:										
Freight originating on this road	7,970,959	11,325,745	7,955,714	6,834,766	9,277,911					
Freight received from connecting roads and other carriers	249,562	228,309	241,698	208,371	203,512					
Total freight tonnage	8,220,521	11,554,054	8,197,412	7,043,137	9,481,423					
Ore (percentage of total tonnage)	80.07	89.11	85.76	81.97	87.29	84.06	85.22	73.70	80.46	82.57
PRODUCTS OF FORESTS.										
Lumber:										
Freight originating on this road	117,470	175,083	168,369	174,450	230,471	229,593	221,783	172,614	215,615	171,096
Freight received from connecting roads and other carriers	8,738	3,742	474	930	1,390	1,069	8,106	820	1,419	4,432
Total freight tonnage	126,208	178,825	168,843	175,380	231,861	230,662	229,889	173,434	217,034	175,528
Other products of forests:										
Freight originating on this road	978,558	1,097,004	794,501	984,321	792,931	[1] 1,173,062	[2] 874,620	[2] 1,054,382	[1] 1,111,368	[1] 988,916
Freight received from connecting roads and other carriers	471,780									
Total freight tonnage	1,450,338	1,097,004	794,501	984,321	792,931	1,173,062	874,620	1,054,382	1,111,368	988,916
Total:										
Freight originating on this road	1,096,028	1,272,087	962,870	1,158,771	1,023,402					
Freight received from connecting roads and other carriers	480,518	3,742	474	930	1,390					
Total freight tonnage	1,576,546	1,275,829	963,344	1,159,701	1,024,792					

MANUFACTURES.										
Petroleum and other oils:										
Freight originating on this road				11	12		62			
Freight received from connecting roads and other carriers	552	599	317	314	425	360	376	422	392	496
Total freight tonnage	552	599	317	325	437	360	438	422	392	496
Sugar:										
Freight originating on this road									12	
Freight received from connecting roads and other carriers	1,098	993	996	902	864	864	837	1,083	955	1,069
Total	1,098	993	996	902	864	864	837	1,083	967	1,069
Iron, pig and bloom:										
Freight originating on this road				661	89	927	641	311	632	696
Freight received from connecting roads and other carriers			21	111	52				150	25
Total freight tonnage			21	772	141	927	641	311	782	721
Iron and steel rails:										
Freight originating on this road	791	848	728	2,726	6,912	465	81	257	240	155
Freight received from connecting roads and other carriers	2,248	2,264	498	994	722	23	2,611		710	1,800
Total freight tonnage	3,039	3,112	1,226	3,720	7,634	488	2,692	257	950	1,955
Other castings and machinery:										
Freight originating on this road	2,974	1,823	2,616	2,844	2,950	2,617	2,771	2,956	2,554	1,896
Freight received from connecting roads and other carriers	1,143	1,999	1,681	3,297	5,408	4,098	2,779	2,323	3,603	2,358
Total freight tonnage	4,117	3,822	4,297	6,141	8,358	6,715	5,550	5,279	6,157	4,254
Bar and sheet metal:										
Freight originating on this road	81	34			153				31	
Freight received from connecting roads and other carriers	898	151	67	84	300	52	30	43	173	28
Total freight tonnage	979	185	67	84	453	52	30	43	204	28
Cement, brick, and lime:										
Freight originating on this road	74	279	78	233	313	12	206		15	15
Freight received from connecting roads and other carriers	11,869	10,183	6,390	10,181	5,830	5,821	4,735	3,705	2,967	3,426
Total freight tonnage	11,943	10,462	6,468	10,414	6,143	5,833	4,941	3,705	2,982	3,441

[1] Represents spruce, mining timber, ties, and logs.

[2] Represents mining timber, ties, pulp wood, and logs.

Statement showing freight traffic movement (company's material excluded), compiled from annual reports of the **Duluth & Iron Range R. R. Co.** *to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902*—Continued.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
MANUFACTURES—continued.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Wagons, carriages, tools, etc.:										
Freight originating on this road		10								
Freight received from connecting roads and other carriers				12				5		
Total freight tonnage		10		12				5		
Wines, liquors, and beers:										
Freight originating on this road	4,996	5,563	4,576	4,935	4,387	3,738	2,617	2,571	3,079	2,487
Freight received from connecting roads and other carriers	2,730	2,182	1,553	1,965	2,158	1,662	1,066	1,357	1,596	1,968
Total freight tonnage	7,726	7,745	6,129	6,900	6,545	5,400	3,683	3,928	4,675	4,455
Household goods and furniture:										
Freight originating on this road	529	390	192	60	116	181	91	97	196	110
Freight received from connecting roads and other carriers	140	203	131	54	71	124	61	44	145	163
Total freight tonnage	669	593	323	114	187	305	152	141	341	273
Other manufactures:										
Freight originating on this road			85	42	61	182	81	62	40	
Freight received from connecting roads and other carriers	1,563	1,766	1,104	1,355	1,791	1,337	1,204	988	1,520	1,619
Total freight tonnage	1,563	1,766	1,189	1,397	1,852	1,519	1,285	1,050	1,560	1,619
Total:										
Freight originating on this road	9,445	8,947	8,275	11,512	14,993					
Freight received from connecting roads and other carriers	22,241	20,340	12,758	19,269	17,621					
Total freight tonnage	31,686	29,287	21,033	30,781	32,614					
Merchandise:										
Freight originating on this road	43,641	42,275	35,746	35,655	31,788	29,103	24,398	26,582	41,191	15,268
Freight received from connecting roads and other carriers	4,636	6,704	4,686	6,133	6,167	4,929	7,598	4,557	4,950	4,291
Total freight tonnage	48,277	48,979	40,432	41,788	37,955	34,032	31,996	31,139	46,141	19,559

Miscellaneous—other commodities not mentioned above:										
Freight originating on this road	29,570	23,494	10,982	6,514	5,270	5,554	3,145	2,302	1,677	10,169
Freight received from connecting roads and other carriers	2,610	5,133	3,788	4,827	3,909	2,642	1,885	1,526	1,869	1,993
Total freight tonnage	32,180	28,627	14,770	11,341	9,179	8,196	5,030	3,828	3,546	12,162
Total tonnage:										
Freight originating on this road	9,169,598	12,673,621	8,974,331	8,048,488	10,354,995	10,209,754	8,747,376	5,154,214	7,728,365	7,578,266
Freight received from connecting roads and other carriers	769,912	291,459	289,071	267,467	264,048	208,734	185,730	124,166	162,250	155,912
Total freight tonnage	9,939,510	12,965,080	9,263,402	8,315,955	10,619,043	10,418,488	8,933,106	5,278,380	7,890,615	7,734,178

The CHAIRMAN. From your knowledge of this traffic and from the exhibits you have as to traffic and transportation conditions on that road, what would you say as to the reasonableness of the rates for the service performed?

Mr. REED. That is objected to for the reason the witness has already said he never had been over either of these roads, and he has no knowledge.

The CHAIRMAN. Can you get that information from these sheets?

Mr. FREER. Yes; I can gather a very fair idea of the traffic and operating conditions; general conditions.

Mr. YOUNG. The witness would not be any better judge of that than we are.

The CHAIRMAN. If he has made a study——

Mr. YOUNG (interposing). It is a question whether we are getting too much condensation. We have the amount which they received, the business which they carried. I don't care anything about his opinion, but I do not see it adds or detracts anything from what appears right there.

The CHAIRMAN. Except he is a man who has studied traffic conditions.

Mr. YOUNG. We have already heard in this hearing that the earnings of these roads were very heavy.

The CHAIRMAN. Yes.

Mr. YOUNG. Do these statements show anywhere the actual cost of these roads?

Mr. FREER. You mean the money that is invested in the road, the cost of construction?

Mr. YOUNG. Yes, sir.

Mr. FREER. No, sir; they show nothing but the capital stock outstanding and the funded debt outstanding.

Mr. YOUNG. That is one thing it is short. We have the capitalization but have not the cost up to date.

Mr. GARDNER. I think we can very well infer what the witness's opinion is, but is this not before the Interstate Commerce Commission at the present time, this question?

The CHAIRMAN. Not as it is here. There is a question of some particular rate over some particular road. I am inquiring as to general conditions.

Mr. REED. There is a case pending before the Interstate Commerce Commission in a complaint against the Great Northern Railroad.

The CHAIRMAN. Does it involve this whole question?

Mr. REED. It involves the whole question because if they reduce the rates the Steel Corporation roads will have to reduce theirs also.

The CHAIRMAN. Any statement he makes here would not be used as evidence in the Interstate Commerce Commission anyway, under the law.

Mr. GARDNER. I understand that. I object to the question, Mr. Chairman. I am inclined to think the question is not competent.

Mr. DANFORTH. Are we not asking him for an opinion he has got to express?

The CHAIRMAN. We do the same thing at every trial, where there is an expert on the stand.

Mr. DANFORTH. But you have your facts there, if you will take the trouble to burrow.

Mr. YOUNG. All the facts except one.

Mr. DANFORTH. And he can not give us that one. If we know how to read, and exercise our knowledge, it seems to me we can learn the facts from these reports just as speedily, or if not as speedily, just as accurately as he can. Personally, I would prefer to exercise my own judgment as to these questions, if we have the facts before us.

Mr. BEALL. We would not be bound by any expression of opinion from him. It would simply be an aid to us in forming an opinion; and he being versed in matters of that sort, is in a better position to interpret tables and to express an opinion on them than we would be.

The CHAIRMAN. If we were trying a question of the safety of some appliance on a railroad, we could bring an expert on to say whether it was safe. We might have all the facts as to the tensile strength of the material, as to the patents under which it was secured, as to its cost, and whether or not it was of the proper material, whether or not it was adequate to perform the service for which it was intended, and that would be all subject to an expert opinion.

If we were trying a case as to the skill of a doctor, we could bring other doctors on the stand to state opinions as to the facts introduced, and only as to the facts introduced.

In every case where an expert testifies, as I understand, if we have a given and admitted state of facts embodied in a hypothetical question, and then he is asked to give an opinion with respect to those facts that are already in evidence, the rule that no man can give an opinion touching the facts that are admitted would exclude expert testimony from every court in the country.

Mr. DANFORTH. The courts are supposed to have experts on both sides of the question. Here we have a person who is supposed to be, and alleged to be brought forward as an expert, about whom I personally know nothing.

The CHAIRMAN. If he has not qualified as an expert, that is a different question.

Mr. YOUNG. I do not think he has qualified on this particular question, as to the reasonableness of this particular rate.

Mr. GARDNER. I would like to ask a question bearing on the subject of his expertness.

Do I understand you to say that you have testified and prepared cases for presentation to the Interstate Commerce Commission and the courts?

Mr. FREER. Not the courts.

Mr. GARDNER. What are the cases you have, as a matter of fact, prepared for presentation to the Interstate Commerce Commission?

Mr. FREER. The first case in which I was interested was a case before the State railroad commission of Ohio. It was a coal-rate case.

Mr. GARDNER. I asked with reference to the Interstate Commerce Commission?

Mr. FREER. Yes. Then, before the Interstate Commerce Commission, the first case in which I participated was the Advanced Rates case.

Mr. GARDNER. In what capacity did you participate?

Mr. FREER. I prepared statistics for the counsel for the shippers in that case, simply a financial history of the principal railroads east of Chicago who were involved in that Advanced Rates case.

Mr. GARDNER. What other cases have you prepared for the Interstate Commerce Commission?

Mr. FREER. I think the next case was Newport News Chamber of Commerce, Newport News, Va., against the Southern Railway and a number of other southern railroads.

Mr. GARDNER. The Newport News Chamber of Commerce?

Mr. FREER. Yes.

Mr. GARDNER. Against certain roads?

Mr. FREER. The Southern Railway and others.

Mr. GARDNER. What other cases?

Mr. FREER. The Bluefield Shippers' Association——

Mr. GARDNER. Before you go on with that, what was involved in the Newport News case? What question?

Mr. FREER. In that case it was a question of rates from Newport News into southern territory being higher than the rates from Norfolk, on the same general harbor. The Newport News people contended that they should have the same rates into the South that Norfolk had.

Mr. GARDNER. What was the other case?

Mr. FREER. The next case was the Bluefield Shippers' Association against the Norfolk & Western Railway.

Mr. GARDNER. What did that involve—coal?

Mr. FREER. No; that involved rates on general merchandise, what we call the class rates, into the coal fields from the west and from the east.

Mr. GARDNER. Have you ever prepared a case relating to the shipment of ore, for the Interstate Commerce Commission?

Mr. FREER. No.

Mr. GARDNER. What other cases besides those three you mentioned have you prepared for the Interstate Commerce Commission?

Mr. FREER. I was interested and participated in the Pittsburgh coal rate case, recently submitted to the commission; the case of John W. Boileau, and the Pittsburgh Coal Co. against the Pennsylvania Co. and the Pittsburgh & Lake Erie Railway.

Mr. GARDNER. Any other cases?

Mr. FREER. Not that have been submitted.

Mr. GARDNER. Does your name appear in the record of any of those cases, before the Interstate Commerce Commission?

Mr. FREER. In the record?

Mr. GARDNER. In the presentation.

Mr. FREER. It appears in the record, not in the decision or the opinion.

Mr. YOUNG. It appears in the testimony?

Mr. FREER. It would appear in the testimony; yes, sir.

Mr. GARDNER. I think he qualifies as an expert on the general question of freight rates. I am doubtful whether he qualifies as an expert on the question of ore rates.

The CHAIRMAN. Does the same condition prevail in regard to coal rates as to ore rates?

Mr. REED. The witness says he does not know.

The CHAIRMAN. I am asking him.

Mr. YOUNG. He said he never saw these roads.

Mr. REED. And it is in evidence in this case that part of the service tendered by these railroads is in the selection of the ore, the classification of it, and the work on the docks, which is all included in this rate. I submit the witness is not qualified to express an opinion on the value of the service until he has at least seen it.

The CHAIRMAN. Have you ever seen these docks and how they are operated?

Mr. FREER. In the Northwest? I have not.

The CHAIRMAN. The docks down here?

Mr. FREER. I have been on some of the docks on Lake Erie; yes, sir.

The CHAIRMAN. Have you ever appeared as a witness before the Interstate Commerce Commission?

Mr. FREER. Yes, sir.

The CHAIRMAN. Did you ever testify to the reasonableness of rates before that commission?

Mr. FREER. Yes, sir.

Mr. GARDNER. Did you ever testify as to the reasonableness of rates when you have not seen the physical property with regard to which you are testifying?

Mr. FREER. Yes, sir; I have.

Mr. GARDNER. And you qualified as an expert before the commission?

Mr. FREER. That, of course, would be in the way of comparison of rates, taking several roads in the same territory.

Mr. GARDNER. That is, you testified to reported facts, not to your opinion.

I am still of the opinion, Mr. Chairman, that the witness does not qualify as an expert on this particular question, and I press my objection to the question.

The CHAIRMAN. The question is this: The witness has testified as to his knowledge generally of transportation conditions, and he has testified he has appeared before the Interstate Commerce Commission.

Upon those facts, about which I have asked him, I now ask him, based on his knowledge and experience, whether this is a reasonable rate.

Mr. DANFORTH. From where to where?

The CHAIRMAN. The rate I am now asking about is the rate from the Messabe Range to Lake Superior.

Mr. YOUNG. The witness has not shown he knows what they do on this rate.

Mr. DANFORTH. He has not shown what the service is, does not know the railroad, does not know the physical conditions there, and has not shown any expert knowledge on ore rates at any time.

Mr. REED. And his tables do not show the cost of the road or anything that would give information on that, except the amount of the capital and the funded debt.

The CHAIRMAN. We have information as to the cost of one; that one cost $600,000.

Mr. YOUNG. Oh, no; we have no such testimony as that.

The CHAIRMAN. Mr. Merritt testified that he built one of those roads.

Mr. YOUNG. I beg your pardon. The engineer testified he built a small portion of that road. There is other testimony in the case, that after that the road was entirely built and extended, but we have not any proof of what it cost.

Mr. Reed. We have Mr. Cotton's statement that $27,000,000 went into one of the roads.

The Chairman. We have the statement of the engineer who built the docks and other construction. The roads have continually held, as I understand, that the measure of their rate, their right to charge a rate, is not based upon the physical valuation of the road, the appraised physical valuation of the road. They have claimed all along that the cost of moving traffic and the capitalization of the road and the fixed charges were the bases upon which rates could be fixed, and not the physical valuation of the road.

Mr. Gardner. And the chair has continually disputed that as a true basis for calculation.

The Chairman. I do not think the railroads are estopped from objecting to it——

Mr. Gardner (interposing). I am not objecting on behalf of the railroads. I do not concede that is a proper way of calculating the rates.

The Chairman. I do not make any such statement as that; I do not say you are.

Mr. Gardner. But I am not estopped from objecting.

The Chairman. Do you know from this document, an official document, approximately what that service is?

Mr. Freer. I can deduce that. This document does not show that.

The Chairman. Can you tell us what it is from the statements given?

Mr. Freer. Yes, I can tell you what I think the approximate cost is from this statement. For the year 1910, for instance, the approximate operating cost for handling that ore would be a little over 24 cents a ton.

Mr. Gardner. Has the witness made any study of the amount of money actually invested in those roads?

Mr. Freer. No, sir, I have not. I am simply now attempting to say what my opinion would be as to the operating cost.

Mr. Gardner. It seems to me impossible for a man to declare what is a reasonable rate until he has made that study.

The Chairman. The cost of transporting that is 24 cents?

Mr. Freer. I will say that approximately the operating cost of handling that ore is 24 cents.

Mr. Young. The witness says he deduces that.

The Chairman. Give us the basis from which you deduce that.

Mr. Freer. I deduce that from the fact that on this railroad, as I said, in 1910 practically 93 per cent of its freight traffic was ore. It constituted nearly its entire traffic. It does a very small passenger business. I find the average haul and the average receipts of this railroad are practically from its transportation of ore.

Mr. Young. Ninety-three per cent?

Mr. Freer. That is the average. You can take the operating ratio and say that its operating ratio represents fairly to the railroad—at least not unfair to them—that its operating ratio applied to its rate on ore would give an operating expense of handling that ore. You are giving the railroad the benefit of the doubt there, because you are assuming that what little passenger traffic they do yields them the same profit that their freight traffic does.

The Chairman. Do you know what the earnings of the road are?

Mr. FREER. This shows the earnings of the road.

The CHAIRMAN. How much?

Mr. FREER. The total operating revenue was $13,916,000 plus. Do you want me to give it in round numbers?

The CHAIRMAN. Yes.

Mr. REED. Why do you take 1910?

The CHAIRMAN. We will take any of them. I just start with 1910. We will give you any year you want.

Mr. YOUNG. They are all there.

The CHAIRMAN. Proceed with the year 1910, and then take up any other year as you see fit.

Mr. REED. I just wondered why you went back beyond 1911.

The CHAIRMAN. Now, explain that further on.

Mr. REED. It is the biggest earning the road ever had.

The CHAIRMAN. That was before you commenced to clean up those minima on the Great Northern.

Mr. REED. In 1909 this same item was $10,000,000 instead of $13,000,000.

The CHAIRMAN. Well, we will take up any other year afterwards. Now, go ahead.

Mr. YOUNG. That is what we have been insisting on. Put the whole table in. That has the whole story.

The CHAIRMAN. The question is that this man is testifying as an expert and is qualified as an expert. Mr. Gardner can see that he is qualified as an expert.

Mr. GARDNER. On general traffic conditions; but I think his statement that he never saw those mines, never saw those railroads, and that he has never investigated the ore rates certainly takes away from him his qualification as an expert on that particular question you asked him, to wit, if, in his opinion, the 80-cent rate is a reasonable rate.

Mr. BARTLETT. May I ask a question, Mr. Chairman?

The CHAIRMAN. Certainly.

Mr. BARTLETT. What is your business?

Mr. FREER. I am traffic manager for industrial and commercial concerns.

Mr. BARTLETT. What does the scope of your duties as traffic manager cover?

Mr. FREER. Principally to advise them in regard to transportation rates.

Mr. BARTLETT. Transportation rates?

Mr. FREER. Yes; and if their rates are out of line, either to secure from the railroads, or if unable to do so from the railroads from the Interstate Commerce Commission some adjustment of the rates.

Mr. BARTLETT. Is it your duty to investigate and determine all the costs of carrying freight and passengers and investigate as to what is a reasonably compensatory rate for doing that particular business?

Mr. FREER. Yes; that would be the question involved, as to whether or not the rates which they were then paying were reasonable rates.

Mr. BARTLETT. And you arrive at that by investigating yourself and securing information from others who are familiar with such subjects?

Mr. FREER. Investigation and inquiry.

Mr. Bartlett. Investigation by yourself?

Mr. Freer. Yes.

Mr. Bartlett. How long have you been engaged in such a position and determining what is a reasonable rate? I mean the position you occupy or have occupied.

Mr. Freer. I have been engaged in the particular work I speak of for the last two years. Prior to that is was similar work.

Mr. Bartlett. For how long?

Mr. Freer. Prior to that, for a year and a half, I was traffic manager for the Columbus Chamber of Commerce, doing for that one body what I have since done for various people; and prior to that service I was in the railroad business itself for about 20 years.

Mr. Bartlett. You have been engaged in the determination of this same question you are about to testify to?

Mr. Freer. The reasonableness of rates; yes, sir.

Mr. Bartlett. You have given that subject a good deal of investigation and study, not only from the facts and investigation of the business of this railroad but of other railroads engaged in similar business?

Mr. Freer. Yes; I have made a study of that question.

Mr. Danforth. This particular railroad?

Mr. Freer. No; not this particular railroad. There has been no ore rate before the commission that I know of. This one now is the first one. This does not involve the reasonableness of ore rates at present, as I understand it.

Mr. Bartlett. The opinion you are about to give as to the reasonableness of this rate is based upon what—your knowledge of what such transportation is worth from your familiarity with the business of railroads in hauling this character of property and your familiarity with what is a reasonable charge upon railroads similarly situated in hauling this particular kind of property?

Mr. Freer. That is one thing, and then the comparison of this rate with rates on ore in other sections.

Mr. Bartlett. And what that charge is by other railroads similarly situated?

Mr. Freer. Yes.

Mr. Young. Do you know any roads situated similarly to this?

Mr. Freer. Not exactly the same as this.

Mr. Young. Do you know of any road except this that performs the same service that this road does in the handling of ore?

Mr. Freer. No; I do not.

Mr. Young. Do you know what this service actually is that they perform, aside from the mere transportation; do you know what they do for the money they get?

Mr. Freer. They transport the ore and classify it and dump it into the vessels. That is according to my understanding.

The Chairman. You have the data before you showing the cost of all of those transactions?

Mr. Freer. This cost here represents the entire cost.

Mr. Littleton. If your question, Mr. Chairman, assumed particular elements in reference to this road which are known to be facts, although they are not necessarily within the knowledge of the witness, and coupled with his experience in traffic matters, could you not then put the question in such a way as to meet Mr. Gardner's objection, that is, assume that this railroad hauls this ore at this rate, and coupled with your knowledge of traffic conditions, would you say this was a reasonable rate?

The CHAIRMAN. Have you ever known a rate to be fixed by taking into consideration the cost of construction of the road?

Mr. FREER. Have I ever known?

The CHAIRMAN. Yes?

Mr. FREER. No.

The CHAIRMAN. Based upon the cost?

Mr. FREER. I have not.

The CHAIRMAN. Have you ever known the cost of construction to be taken into consideration as a material element?

Mr. FREER. It has been mentioned by the Interstate Commerce Commission, but they never have had that data themselves in any case.

Mr. BARTLETT. Do they not have data as to the cost of construction?

Mr. FREER. No; not absolute data as to cost of construction.

The CHAIRMAN. Is the cost of construction given on any of these sheets?

Mr. FREER. No, sir.

Mr. LITTLETON. What elements do they take into consideration?

Mr. FREER. I would not want to say as to what all the elements are. They do consider to some extent the cost of the service, the value of the service, and they consider the rates as compared with the rates in other sections.

Mr. GARDNER. Do I understand that the railroads do not take into account, in making rates, the cost?

Mr. FREER. Do they not take into account the cost, you say?

Mr. GARDNER. The cost to build the railroad. Are you not speaking of railroads that are subject to competition when you say that?

Mr. FREER. What?

Mr. GARDNER. Are you not speaking of railroads subject to competition when you say that?

Mr. FREER. I do not know that I said the railroads did not take into consideration the cost of the service.

Mr. GARDNER. No; the cost of construction.

Mr. FREER. I do not think the railroads take the cost of construction into consideration.

Mr. GARDNER. To put an extreme case, take the railroad that goes up to the top of Mount Washington in New Hampshire. That is not subject to competition. Do you not think the rates on that railroad are based very largely on the cost of the construction of that railroad?

Mr. FREER. I could not tell you. I have no information as to that.

Mr. GARDNER. Well, in the nature of things, it must be so, must it not?

Mr. FREER. I would not say so; no, sir.

Mr. GARDNER. Because, inevitably, if they charge too high a rate, that would be inviting competition, whereas if they charge a rate that does not return an adequate amount on the cost of the construction they will be operating at a loss. It seems to me inevitable that a railroad that is not subject to competition must conside hert cost of its construction in imposing a rate.

Mr. FREER. Well, there are very few railroads that are not subject to competition.

Mr. GARDNER. I was taking a railroad that had no competition.

The CHAIRMAN. I do not want to interrupt you, but some of the gentlemen would like to get a ruling on that question that passed before.

Now, you stated that you had experience as a traffic manager and in the study of rates, and you have before you authentic information showing the cost of this service and the general character of it and the net earnings and the income to the railroads from that service.

Mr. FREER. That is shown in this statement.

The CHAIRMAN. From that information would you say that that rate was reasonable or unreasonable?

Mr. REED. The question is objected to until the witness has had some knowledge of the nature of the service rendered, the cost of the road, and the cost of maintenance, and none of that information is given on the tables before him.

The CHAIRMAN. The objection is overruled. Do you wish to appeal from the ruling of the Chair?

Mr. GARDNER. Mr. Chairman, the question as put does not meet my objection, and I appeal from the decision of the Chair.

The CHAIRMAN. Mr. Clerk, will you call the roll?

Mr. DANFORTH. I would like to add an objection which seems to go to the heart of the entire matter, and that is, we substitute the judgment of this gentleman in the place of what we are bound to exercise ourself, and that is our judgment on these tabulations.

Mr. DANFORTH. As I stated before, we can read these just as intelligently as he can, and this question is one for us to decide and not for him to decide.

Mr. LITTLETON. In that connection, so that the record will contain my view of it, I think I would not undertake at this stage of this hearing to standardize the testimony to the highest technical standard, because, if we did, we would have to undo very much that we have done heretofore. It may be that there is some force in the objections that have been made by Mr. Gardiner and Mr. Danforth, but I take it that the committee can receive in an advisory capacity, pro tanto, the witness's testimony for what it is worth and weigh it in the balance. For that reason I should cast my vote, when the time comes, to sustain the ruling of the chairman.

The CHAIRMAN. Call the roll.

The clerk called the roll of the members present, with the following result:

Yeas.—Mr. Beall, Mr. McGillicuddy, Mr. Littleton, Mr. Bartlett, Mr. Stanley. Nays.—Mr. Young, Mr. Gardiner, Mr. Danforth, Mr. Sterling.

The CLERK. There are five voting aye and four voting no.

The CHAIRMAN. You may answer the question.

Mr. FREER. What is the question?

The CHAIRMAN. State whether that rate is a reasonable rate or an unreasonable rate.

Mr. LITTLETON. Before he answers this question, I would like to say that there is a vote coming up on the judiciary bill, and I would ask to be excused.

Mr. Freer. What was the question?

The Chairman. State whether that rate was reasonable, in your opinion.

Mr. Freer. I would say it was unreasonable.

Mr. Bartlett. What would be a reasonable rate?

Mr. Freer. I could not tell you what would be a reasonable rate.

Mr. Bartlett. Why do you think it is unreasonable?

Mr. Freer. I could tell you what I would say would be the approximate cost of handling that business.

Mr. Bartlett. Including a reasonable profit?

Mr. Freer. That is the point I can not say, as to what the return to the company should be, but, for instance, take the year 1910, and the approximate operating cost of handling that ore would be about 24 cents. Now, based on that, I would say that 80 cents would be unreasonable.

Mr. Bartlett. Where do you get these figures of 24 cents per ton from as the cost of handling the ore?

Mr. Freer. From this report.

Mr. Young. He deduces it.

Mr. Freer. I deduced that from the report, that this average figure will apply to the ore.

Mr. Bartlett. Is that 24 cents per ton as the cost of handling the ore a reasonable cost, in your opinion?

Mr. Freer. A reasonable cost?

Mr. Bartlett. Yes, sir.

Mr. Freer. Yes, sir; I would say that is a reasonable cost.

Mr. Bartlett. That charge is a reasonable charge, then, for handling the ore—I mean the cost.

Mr. Freer. That is the cost?

Mr. Reed. That does not include maintenance cost, does it?

Mr. Freer. Yes, sir; it does include maintenance—maintenance of way, maintenance of structure, and maintenance of equipment.

Mr. Young. Does that appear in here?

Mr. Freer. Sir?

Mr. Young. Do those items appaer on this statement?

Mr. Freer. No; but it shows the total operating expense here, and those items are included in the total operating expense.

Mr. Young. How do you know, on this report?

Mr. Freer. I do not know on that report.

Mr. Young. Well, that is what we are talking about.

The Chairman. He can testify to that.

Mr. Freer. I know the total operating expense items of the Interstate Commerce Commission report embraces those items.

Mr. Bartlett. In arriving at what you said, that this 80-cent charge is an unreasonable charge, or not a reasonable charge, why is it you can not arrive at what is a reasonable charge. If your business is the investigating of railroad rates in order to determine what is a reasonable charge, why is it you can not say what would be a reasonable charge?

Mr. Freer. I might say what, in my opinion, would be a reasonable charge, but without knowing what the railroad is entitled to as a return on its investment I could not say.

Mr. Bartlett. Generally, in your investigation as an expert before railroad commissions, what is regarded as a reasonable return upon investments—5 per cent, 4 per cent, 6 per cent, or what?

Mr. FREER. Well, they differ. Some ask for 6 per cent and some ask for 8 per cent.

Mr. BARTLETT. What do the railroad commissions determine as reasonable?

Mr. FREER. I do not know. The railroad commissions have never stated.

Mr. BARTLETT. What do you believe to be a reasonable return?

Mr. FREER. Well, I think that would differ in different territories, probably in different sections of the country.

Mr. BARTLETT. A reasonable net return?

Mr. FREER. Yes. Six per cent, I should think, would be ample.

Mr. REED. On property that would be valueless in 20 years, with the exhaustion of the ore. I beg your pardon, Mr. Bartlett.

Mr. BARTLETT. That is all right, sir. What return does 80 cents ton on that haul igve?

Mr. FREER. Well, the 80-cent rate in that year gave them a return of 240 per cent on their capital stock, after paying the interest on the funded debt.

Mr. BARTLETT. And operating expenses?

Mr. FREER. And paying all operating expenses; yes sir.

Mr. BARTLETT. It would give a return of 240 per cent, and that is one reason why you say it is unreasonable.

Mr. FREER. That is one one thing that makes me think so.

Mr. YOUNG. Do you know——

Mr. GARDNER. Have you not overlooked the difference in the capital stock and the amount of money invested? For instance, when the capital stock exceeds the amount of money invested, everybody says that 4 per cent return is unreasonable. Now, when the money invested far exceeds the capital stock, it seems to me it is unreasonable, without any knowledge of the amount of money that was invested, to say that any particular return is unreasonable, taking into account the fact that you do not know how much is invested, and taking into account the fact that you do not know how soon this railroad will be absolutely worthless on account of the exhaustion of the ore. That, it seems to me, Mr. Bartlett, is the weak point in the gentleman's giving an opinion.

Mr. BARTLETT. And yet, Mr. Gardner, the Supreme Court, in a case it had before it, Smythe against Ames, a Nebraska case, said that the railroads should not be permitted to charge an unreasonable rate for their service in order that the stockholders might earn dividends.

Mr. YOUNG. That would seem to be an indication that they would substitute the actual cost of the road for its capitalization.

Mr. BARTLETT. No; I do not think so.

The CHAIRMAN. At what is this road bonded?

Mr. FREER. $13,101,000.

Mr. BARTLETT. What is the capital stock?

Mr. FREER. $4,112,500.

Mr. BARTLETT. What was the net return?

The CHAIRMAN. What is the total capitalization per mile of that road?

Mr. FREER. That is not shown here. I will have to figure that out for you.

Mr. DANFORTH. What is the capital stock?

Mr. Freer. The capital stock is $4,112,500, and the funded debt is $13,101,000.

Mr. Bartlett. What is it valued at?

Mr. Gardner. Which report have you there—the Duluth & Missabe Northern?

Mr. Freer. The Duluth & Missabe Northern; yes, sir. $58,000 a mile.

The Chairman. What is the average capitalization for railroads in the United States, including those in the mountains?

Mr. Freer. I can not tell you that. If you had the Interstate Commerce Commission's statistics here, I could get it for you. I do not have it in my head.

The Chairman. It would be about $58,000 a mile, would it not?

Mr. Freer. I would not like to say that without looking it up.

Mr. Danforth. Would the fact that it had been testified to here that the cost to reproduce this railroad, with the equipment which is now on the railroad, was $27,000,000, have any effect upon your judgment?

Mr. Freer. The cost of reproducing?

Mr. Young. Assuming that to be true.

Mr. Danforth. Yes; assuming that to be true.

Mr. Freer. I would take that into consideration. Not having that, of course, and only having the capitalization——

The Chairman. The testimony here was that the cost of building that road, including the dock, was $5,000,000, by Mr. Rockefeller, and he spent $2,000,000 of that $5,000,000 in borrowing the money, paythe interest—would you take that into consideration?

Mr. Freer. Certainly.

The Chairman. That was the testimony of the engineer who built the road.

Mr. Freer. Yes; I would take that into consideration.

The Chairman. If the other testimony was that of a lawyer, who said he did not know anything about the cost of building the road, would you take that into consideration?

Mr. Danforth. That is not quite true. He testified as to what the State board had found.

The Chairman. What the State tax commission had found.

Mr. Danforth. Yes; that is what he testified to.

Mr. Young. No; that was not the tax commission. That was the railroad and warehouse commission.

Mr. Danforth. Well——

Mr. Young. The tax commission is an entirely different thing.

The Chairman. What did you find the total capitalization of that road to be?

Mr. Freer. About $58,000 a mile.

Mr. Young. How much is the total capitalization—not per mile, but how much is the capitalization of the road?

Mr. Freer. $17,213,500.

Mr. Bartlett. And upon that they earned how much in 1911?

Mr. Freer. 1911?

Mr. Bartlett. Yes.

Mr. Freer. On the four millions, they earned——

The Chairman. I will hand you this report, and ask you what is the average capitalization per mile of railroad in the United States.

Mr. Freer. $62,657.

Mr. Danforth. You did not answer Mr. Bartlett's question.

The Chairman. Let me get that answer straight. I beg your pardon, Mr. Bartlett.

Mr. Freer. $62,657.

The Chairman. For the whole United States?

Mr. Freer. Yes, sir.

Mr. Young. Does that include double track?

Mr. Gardner. Is that the average for the railroads built in the mountains?

Mr. Freer. It is the average for the United States.

Mr. Gardner. That is, it includes all sorts.

Mr. Freer. Of course, it includes both the expensive——

Mr. Young. Does that include single track or double track, or, in the case of the Pennsylvania Railroad, does it include four tracks? Is that the mileage of the track or the mileage of the railroad?

Mr. Freer. The mileage of the railroad.

Mr. Young. And it would include a road with four tracks?

Mr. Freer. And one with a single track; yes, sir.

Mr. Young. It can not be a very valuable average if that is the way it is made up.

Mr. Danforth. Do they not take four-track mileage as four times the mileage of a single track?

Mr. Freer. No, sir.

Mr. Danforth. And treat it as one mileage for the four tracks?

Mr. Freer. It is per mile of line.

Mr. Reed. Certainly not when you are applying it to a railroad over Muskeag Swamp?

Mr. Freer. You asked me a question, Mr. Bartlett.

Mr. Bartlett. I asked you what was the net return in 1911 upon that capitalization?

Mr. Freer. The total capitalization?

Mr. Bartlett. Yes.

Mr. Freer. You mean the stock and funded debt?

Mr. Bartlett. Well, no; the capitalization?

Mr. Freer. You want to know what they earned on the total capitalization?

Mr. Bartlett. Yes.

Mr. Young. Including the bonds, do you mean, Judge?

Mr. Bartlett. No.

Mr. Freer. You mean on the $4,000,000?

Mr. Bartlett. Yes; let us have that. That is the capitalization.

Mr. Young. And the net earnings?

Mr. Freer. They paid on the $4,000,000, 125 per cent, which was more than they earned. In other words, part of that was declared from surplus, and not from the actual earnings of that year. They earned on the capital stock a little over 111 per cent, and they declared a dividend of 125 per cent, the balance, of course, coming out of the surplus.

Mr. Bartlett. How much of that was paid upon the debt?

Mr. Freer. That does not appear here.

Mr. Bartlett. All right, you need not look for it.

The Chairman. In that connection, give us the total earnings for 10 years. Have you the total earnings?

Mr. FREER. The total earnings?

The CHAIRMAN. Yes.

Mr. FREER. Not the total. It is here, year by year.

Mr. YOUNG. Have you the net and gross, both?

Mr. FREER. They have the total operating revenues and expenses, and then the net earnings. Then they show the net income, which is after they have taken care of the funded-debt charges.

Mr. YOUNG. Are their interest charges deducted from the net earnings before that amount is fixed?

Mr. FREER. Before what?

Mr. YOUNG. Before they fix these net earnings, is the interest charge on the bonds taken out?

Mr. FREER. Not before you reach this item, which says, "Net revenue." Net revenue is simply a deduction of operating expenses. Then, below that, they have "Net corporate income," which is after taking care of the taxes and fixed charges.

Mr. YOUNG. Yes.

Mr. DANFORTH. Including the interest on the bonds.

Mr. FREER. Including the interest on the bonds.

Mr. YOUNG. Can you tell what percentage the net revenue is on the entire capitalization, including the bonds?

Mr. FREER. I can figure that.

Mr. YOUNG. Yes.

Mr. FREER. Taking which year—any particular year?

Mr. YOUNG. Take 1910, and then take 1911.

Mr. REED. I might say that 1910 is not a fairly representative year.

Mr. YOUNG. We all know that, if we know anything about the iron and steel business. I have asked for 1910 and 1911, as to what these people would have earned if they built a road with their own money, the entire investment.

Mr. FREER. I can not give you that, Mr. Young, from these figures.

Mr. YOUNG. Why?

Mr. FREER. You want to know what they earned on the total capitalization?

Mr. YOUNG. Yes.

Mr. FREER. You see, there is one item here which says, "Net operating revenue." Now, I can not tell you that because the taxes must be deducted. If I had the taxes, I could tell you.

Mr. YOUNG. Take it as it is, leaving the taxes out. We know the taxes will have to be deducted afterward.

Mr. FREER. All right. A little over 57 per cent.

Mr. YOUNG. What would it be on the $27,000,000, assuming that the road cost that?

Mr. FREER. $27,000,000, in round numbers?

Mr. YOUNG. $27,000,000 even.

Mr. REED. Of course, that $27,000,000 estimate was made five years ago.

Mr. YOUNG. Yes.

Mr. REED. There has been a great deal of money spent on it since.

Mr. FREER. Thirty-six per cent.

Mr. YOUNG. Now, take it for 1911.

Mr. BEALL. What is that answer?

Mr. YOUNG. Thirty-six per cent.

Mr. DANFORTH. That is not taking into consideration taxes?

Mr. YOUNG. No.

Mr. FREER. That should be deducted from the revenue.

The CHAIRMAN. Do you know on what valuation this road pays taxes?

Mr. REED. I do not know what the Minnesota system of taxation is.

The CHAIRMAN. Do you know what it is valued at for the purpose of any taxation?

Mr. REED. I have no idea, except that Mr. Cotton testified to $27,000,000 on June 30, 1907, and I do know that there has been a very large amount of money spent on the permanent improvement of the road since that time.

Mr. FREER. That would be a little over 35 per cent.

Mr. YOUNG. 1911?

Mr. FREER. 1911, on the $17,000,000?

Mr. YOUNG. How much on the $27,000,000?

Mr. FREER. Twenty-two and one-half per cent.

Mr. YOUNG. Take 1908, for instance, and see how that works out.

Mr. BARTLETT. Do you, from your experience as a railroad traffic manager or from your familiarity with proceedings before the Interstate Commerce Commission, know what the average taxation is?

Mr. FREER. I do not; no, sir.

Mr. BARTLETT. Do you know whether it would exceed 2½ per cent or not?

Mr. FREER. I do not know what the taxation is.

Mr. YOUNG. I presume it would be easy enough to get those figures.

Mr. FREER. Yes; very easy.

Mr. GARDNER. Mr. Chairman, I would like to ask——

Mr. YOUNG. Let me get these figures first.

Mr. FREER. I can give you the facts right here now, if you want them.

Mr. YOUNG. He says he can give you the facts now.

Mr. BARTLETT. All right.

Mr. FREER. I think I can, at least. On the Duluth, Missabe & Northern in 1910, the taxes were $19,384.

The CHAIRMAN. On the $27,000,000 worth of property?

Mr. FREER. No; I have the wrong line there—$650,275.

Mr. BARTLETT. On the $27,000,000 of stock?

The CHAIRMAN. Do they value the property?

Mr. FREER. They do not value the property here; no, sir.

The CHAIRMAN. Do you know what per cent that is?

Mr. FREER. No, I do not.

The CHAIRMAN. Do you know what per cent they paid in taxes?

Mr. FREER. Do you want me to tell what per cent that would be on $27,000,000?

The CHAIRMAN. No; I want to know if they give the per cent there.

Mr. FREER. No, sir.

Mr. BARTLETT. $650,000.

The CHAIRMAN. Is that on the range and on the road, or is it on the road by itself?

Mr. FREER. It is on the railroad, I assume. I could not tell you.

Mr. YOUNG. It is the railroad. The Interstate Commerce Commission would not have anything to do with anything else.

Mr. FREER. There is another question that you asked me.

Mr. Young. I asked you about those figures for——

The Chairman. Putting it at 2 per cent, that represents a capitalization on what amount, or 2½ per cent?

Mr. Freer. Two per cent?

The Chairman. Yes.

Mr. Freer. That would represent thirty-two and a half million dollars at 2 per cent.

Mr. Young. I presume that is not based on the valuation. It is probably based on the earnings, or something of that kind.

Mr. Freer. I do not know what the basis of taxation is.

The Chairman. We will have to get that from the Minnesota Tax Commission. The tax in Minnesota is 5 per cent on the gross earnings, is it not?

Mr. Reed. I do not know.

The Chairman. I was going to call your attention to this fact. I am pretty sure Mr. Cotton and these other people testified that in Minnesota they taxed the gross earnings of railroads. I think it is the gross earnings, but I know it is the earnings. That has been testified to.

Mr. Young. Now, if you will go back and get that 1908 figure——

Mr. Freer. The capitalization was different in 1908. It was $13,000,000 instead of $17,000,000.

Mr. Young. Yes.

Mr. Freer. Do you want me to assume that the $27,000,000 still stood at that time?

Mr. Young. Yes.

Mr. Reed. The $27,000,000 estimate was made in 1907.

Mr. Freer. 1907.

Mr. Young. Yes.

Mr. Freer. In 1908, Mr. Young, that figure was 44.4 per cent.

Mr. Young. On the $13,000,000?

Mr. Freer. On the thirteen million and some odd thousands of capitalization. Now, on the $27,000,000 it is 21.6 per cent.

Mr. Reed. Mr. Stanley, I can give you the information as to what property these bonds are liens on. The $1,174,000 of first-mortgage fives is a lien on 64 miles of road; the $2,326,000, consolidated sixes, is a lien on anything that was owned in 1893.

The Chairman. By the Duluth, Missabe & Northern Railroad?

Mr. Reed. By the Duluth, Missabe & Northern Railroad, and then there is a general mortgage of $9,601,000. It is not stated what that is a lien on.

The Chairman. When do those bonds mature?

Mr. Reed. The first mortgage fives were dated January 1, 1892, and are due January 1, 1922. The consolidated sixes are dated January 1, 1893, and are due January 21, 1923. The general fives are dated January 1, 1906, and are due January 1, 1941.

The Chairman. What was the amount of those?

Mr. Reed. $9,601,000.

Mr. Bartlett. Now, Mr. Witness, as to this question. I notice in a report of the Interstate Commerce Commission that the railways were taxed in Minnesota amounting to $461 per mile on all railroads—not on this road, but on all railroads.

Mr. Freer. In Minnesota?

Mr. BARTLETT. In Minnesota. It amounts to that, $461 a mile. Can you ascertain how much the percentage would be on this road?

Mr. FREER. Assuming that that $461 average applies to this road, do you mean?

Mr. BARTLETT. Yes; assuming that.

Mr. FREER. I do not see that that is any more valuable than the $650,000 actual figures which we had.

Mr. YOUNG. We have the actual amount paid in one year.

Mr. FREER. And those give the average on all the roads per mile?

Mr. BARTLETT. Yes.

Mr. FREER. Well, we had there the actual figures paid for in 1910 on this particular road.

Mr. BARTLETT. Did you arrive at what the per cent of taxation was?

Mr. FREER. No; I could do that, though. You want to know on what basis of capitalization, and then on the basis on $27,000,000.

Mr. BARTLETT. Give us the $27,000,000 first.

Mr. FREER. I have given those figures. I think it was $650,000.

Mr. YOUNG. Six hundred and fifty thousand and some odd dollars.

Mr. FREER. It is a little over 2.4 per cent on $27,000,000.

Mr. BEALL. Assuming that you paid $650,000 taxes, how much would that be per mile for that year on this road?

Mr. FREER. It would be about $2,180 a mile.

Mr. BARTLETT. For taxes?

Mr. FREER. Yes, sir; on that road in 1910.

Mr. BEALL. It would be a great deal more than the average for the State?

Mr. FREER. Yes.

Mr. BEALL. And if it is based on the income, that would indicate that the income of this road per mile was a good deal above the average income of the State.

Mr. FREER. If it were based on the income; yes, sir.

The CHAIRMAN. Is there anything in the operation of these roads that makes the cost of moving this traffic unusually expensive?

Mr. FREER. No, sir; the cost of moving the traffic is unusually low.

The CHAIRMAN. Explain that. Why is it low?

Mr. BARTLETT. What is the ratio, ordinarily, of railroad operation?

Mr. FREER. It is over 60 per cent. I think about 66 per cent.

Mr. BARTLETT. What is this?

Mr. FREER. It varies in different years.

Mr. BARTLETT. Since 1910.

Mr. FREER. 1910 is a little over 30 per cent.

Mr. BARTLETT. 1911?

Mr. FREER. A little over 40 per cent.

Mr. YOUNG. Mr. Chairman, I find on page 80 of this Interstate Commerce Commission report for the year 1910, a table with this heading: "Statement No. 54. An analysis of taxes by States and Territories, showing bases of payment according to the various lines under which railways are taxed." Then comes a list of the rest of the States. Under Minnesota, I find that there is a tax of $2,482 on the value of real and personal property, a tax of $3,684,804 on gross or net earnings, revenue and dividends, and a tax of

$90,775 on property owned and not used in operation; so it seems that nearly the whole tax is on earnings either net or gross or dividends.

The CHAIRMAN. That is, for that Missabe road.

Mr. YOUNG. No; on all the roads in Minnesota. I assume that is the law.

The CHAIRMAN. What is the total amount of tax there? It is over $600,000, is it not?

Mr. YOUNG. $3,864,000.

Mr. BARTLETT. That is on the income.

Mr. YOUNG. That is on the gross or net earnings, and the other amounts are very small.

The CHAIRMAN. Based on the earnings?

Mr. YOUNG. Based on earnings of some sort, or dividends.

The CHAIRMAN. All right, Mr. Gardner.

Mr. GARDNER. You expressed the opinion, Mr. Freer, that the percentage of dividends on capital stock was one of your reasons for saying that the rate is unreasonable. Are you familiar with the way the Bessemer & Lake Erie Railroad was financed?

Mr. FREER. Familiar with the way in which it is financed?

Mr. GARDNER. Yes.

Mr. FREER. No, sir.

Mr. GARDNER. It is a railroad which has an exceedingly small capital stock.

Mr. FREER. I know that, sir.

Mr. GARDNER. And an enormous bonded indebtedness.

Mr. FREER. I know that; yes, sir.

Mr. GARDNER. Just for the sake of stating it once for all, I want to make it perfectly clear why, to my mind, the return on the capital stock of a railroad is no indication at all of the reasonableness of the rates charged, and I am going to ask you a succession of questions to bring out my point. Now, suppose a railroad that is owned by one person or one interest chooses to capitalize itself with $10,000 worth of capital stock and $1,000,000 worth of bonds. Then the railway would have available for investment $1,010,000, would it not?

Mr. FREER. $1,010,000?

Mr. GARDNER. Yes.

Mr. FREER. I thought you said $10,000,000 in one place and $1,000,000 in another.

Mr. GARDNER. $10,000 in capital stock and $1,000,000 in bonds. It would have available for investment $1,010,000?

Mr. FREER. Yes, sir.

Mr. GARDNER. Now, you estimate that 6 per cent is a fair return, we will say, on an investment. The earnings on that railroad then might reasonably be $60,600 per annum. Now, putting those bonds at 4 per cent, out of those net earnings of $60,600 per annum, $40,000 would be applicable to the interest on the bonds, leaving a balance of $20,600, which would be applicable to dividends on that stock.

Mr. FREER. Yes, sir.

Mr. GARDNER. In other words, a dividend of 206 per annum on the capital stock. Now, does it not all depend upon how a road is capitalized as to whether or not an apparent gigantic return on the capital stock represents a gigantic return on the whole investment?

Mr. FREER. Yes, sir; it does.

Mr. GARDNER. That is the reason why I say that the return on the capital stock is not an indication of the reasonableness of a rate or the reasonableness of profits on an investment, unless we first find out what the actual investment was.

Mr. FREER. But in the absence of the——

Mr. GARDNER. You, by the way, agree with my line of reasoning?

Mr. FREER. I do; yes, sir; but in the absence of the capital investment we tried this to see what it would give, for what it is worth.

Mr. GARDNER. It seems to me it is not worth very much. I heard the same argument applied other than to the case of the Bessemer & Lake Erie, and it was by no means convincing to me. I do not mean to say by that I was unconvinced that the Bessemer & Lake Erie were earning a very large return on the investment, but I was not convinced that it was the proper way of calculating what return they were earning.

The CHAIRMAN. Suppose you had two railroads, between two different points, one running over a mountainous territory and the other following water. One is built at a cost of $10,000 a mile and the other at a cost of $50,000 a mile. Would the road that was built at a cost of $50,000 a mile be justified in charging five times as much as the road which was built at a cost of $10,000 per mile?

Mr. FREER. Would it be justified?

The CHAIRMAN. Yes; before the Interstate Commerce Commission, under the laws.

Mr. FREER. Why, if it cost it five times as much to construct its road and five times as much to haul its freight, I would say yes.

The CHAIRMAN. I am speaking now simply of the cost of construction.

Mr. FREER. I would not say that, from that one thing alone; no, sir.

Mr. BARTLETT. If that was true, the road that could charge 10 cents for what the other one charged 50 cents would get all the business?

Mr. FREER. If they were competing roads. That was not embraced in his question. I understood him to say between different points.

The CHAIRMAN. I said between the same points.

Mr. FREER. Oh, between the same points.

The CHAIRMAN. When this ore reaches Duluth, it is transshipped in vessels and carried over the Great Lakes to Erie, is not that true?

Mr. FREER. To where?

The CHAIRMAN. When this ore reaches Duluth, it is transshipped to Lake Erie ports, is it not?

Mr. FREER. Yes, sir; and some Lake Michigan ports, I think.

The CHAIRMAN. What line of steamers transports this ore?

Mr. FREER. There are various lines.

The CHAIRMAN. Do you know what the rate is on ore for Lake carriers between Duluth, say, and Conneaut and Erie and those ports in Ohio?

Mr. FREER. My information is that the rate was 65 cents per gross ton from the Superior ports to Lake Erie ports.

The CHAIRMAN. What line of steamers transports this ore?

Mr. FREER. There are various lines of steamers.

The CHAIRMAN. I believe you stated what the rate is.

Mr. **Freer**. Sixty-five cents is the open rate, as I understand it. The contract rates are different.

The **Chairman**. Do you know the percentage of this ore that is carried by the Pittsburgh Steamship Co?

Mr. **Freer**. The percentage of ore carried by the Pittsburgh Steamship Co?

The **Chairman**. Well, if you have to figure that——

Mr. **Freer**. I could give it to you approximately.

The **Chairman**. I was going to say that it is about time for us to adjourn, and we can take this examination up when we come back.

Mr. **Bartlett**. Mr. Gardner has not finished.

Mr. **Gardner**. Yes; I had finished.

Mr. **Freer**. I could tell you, Mr. Stanley, approximately for the year 1910. For the year 1910 it was approximately 33 per cent.

The **Chairman**. How much?

Mr. **Freer**. Approximately 33 per cent in 1910.

Mr. **Bartlett**. I want to ask you a question, Mr. Witness. You were asked by Mr. Gardner if a railroad had a capital stock of $10,000 invested, and issued $1,000,000 worth of bonds, what sort of financiering of a concern would you call that? Would that commend itself to business people, that a corporation should only put $10,000 in its capital stock, and then proceed to develop the property and charge the public with $1,000,000 worth of bonds?

Mr. **Gardner**. That was not my question. I instanced the case, first, of the Bessemer & Lake Erie, where precisely that thing was done. I instanced this in a case where it was all owned by one concern, and there was no question of the public taking up the indebtedness, where, for their own convenience, it was capitalized in that way. As a matter of fact, it was the Bessemer & Lake Erie, unless I am mistaken.

Mr. **Reed**. A half million dollars; yes, sir.

Mr. **Gardner**. A half million dollars, and then assuming the very large debt which the constituent railroads could not pay.

Mr. **Bartlett**. While they called it capital stock and bonds, the $1,010,000 worth of capital stock and bonds would really be regarded as part of the capital stock, would it not?

Mr. **Gardner**. Certainly.

Mr. **Freer**. It is a part of the capitalization.

Mr. **Bartlett**. Well, capitalization.

Mr. **Freer**. Yes, sir.

Mr. **Bartlett**. What would be the advantage to the people who owned the property, the stockholders, to do such a thing as that, to put a capital stock of only $10,000 in a property that is worth $1,010,000?

Mr. **Gardner**. May I answer that question?

Mr. **Bartlett**. Certainly.

Mr. **Gardner**. Suppose a railroad is a complete failure, and that its stock has gone down to be worth only a nominal amount, we will say, $5 a share, but it still has this large outstanding debt which it can not pay, and is in the hands of the receivers. Along come you and I and say, "We will buy you out; we will assume all your bonded indebtedness, but we will only give you what your stock is worth in the market." That is precisely what was done in the case of the

Bessemer & Lake Erie. They said, "We will invest $500,000, because your equity is only worth $500,000. That will be our capital stock, and our bonded indebtedness will be your indebtedness, which we will assume"——

Mr. BARTLETT. Which was greater than the value of the property.

Mr. GARDNER. The value of the stock, which was nothing but an equity, had entirely disappeared, and the new company capitalized simply the equity, and assumed the very large debt, which was satisfactory to everybody, as the evidence showed, because the persons who held the indebtedness were only too glad to have it taken up by responsible parties, and the men who held the stock, having discovered it was worthless, and having this obligation which they could not meet, were only too glad to sell it at a very small figure.

Mr. BARTLETT. And took a chance of utilizing the property by improvements so as to meet the debt and make the stock valuable after a while.

Mr. GARDNER. That was exactly what happened, and they issued bonds for further improvements.

Mr. BARTLETT. I did not understand you stated it that way.

Mr. YOUNG. I take it, Judge Bartlett, that there were a good many roads some time ago, that, if they had been honestly capitalized at what went into the situation, the situation would have been just about what Mr. Gardner has suggested. They were built out of bonds. The stock represented the hopes.

Mr. BARTLETT. The hope and local patriotism.

Mr. YOUNG. Yes.

The CHAIRMAN. And water.

Mr. YOUNG. I prefer to have it called hope.

The CHAIRMAN. The committee will stand adjourned until 2 o'clock.

Whereupon, at 12.50 o'clock p. m., the committee took a recess until 2 o'clock p. m.

AFTER RECESS.

The committee reassembled at 2 o'clock p. m., pursuant to the taking of recess.

The CHAIRMAN. The committee will resume its session.

STATEMENT OF G. M. FREER—Continued.

The CHAIRMAN. Before we adjourned, Mr. Freer, they were asking you some questions about your knowledge as to the rates charged. Do you know anything about what the freight rates were, charged for the transportation of ore on other roads for that haul?

Mr. FREER. You mean in the Northwest or below the Lakes? I have information in regard to both sections.

The CHAIRMAN. Give us the information for both sections, if you know.

Mr. FREER. The information that I have given covers the Missabe and Vermillion range rates. The rate from the New Baraboo district in Wisconsin, down to Chicago, is 70 cents a gross ton, being a 180-mile haul. The rate from the Crystal Falls range into Escanaba and Menominee is 40 cents a gross ton.

Mr. REED. How many miles?

Mr. **Freer**. Down to Menominee it ranges 100 miles and over.

Mr. **Young**. To where?

Mr. **Freer**. To Menominee from Crystal Falls.

Mr. **Young**. They do not haul anything to Menominee?

Mr. **Freer**. They publish a rate to Menominee, but haul it to Escanaba. I am not positive as to the distance to Escanaba, but I should say it was about 70 miles—65 or 70 miles.

Mr. **Young**. Crystal Falls is pretty near the extreme end of the line?

Mr. **Freer**. It is at the upper section.

Mr. **Young**. The great bulk of that ore is hauled from Iron Mountain and Norway?

Mr. **Freer**. I think it is 42 or 43 miles.

Mr. **Young**. Something like that.

Mr. **Freer**. It ranges, I should say, from 40 miles to about 65 miles into Escanaba. They publish the same rate to Menominee, although it is simply a paper rate, as I understand it.

Mr. **Young**. There is no ore hauled there.

Mr. **Freer**. It is a considerably greater distance.

Mr. **Young**. There are no ore docks at Menominee and no ore is handled there?

Mr. **Freer**. No.

The **Chairman**. Can you give us the ore rates at this side of the Lakes?

Mr. **Freer**. I can give you some of them. The rate to the Pittsburgh district is 96 cents, and to the valleys it is 56 cents.

The **Chairman**. Give us the distances when you give us the rates.

Mr. **Freer**. The Pittsburgh district would be an average from 128 to 145 miles by the different routes. Into the valleys I would say 65 miles from Cleveland down to Youngstown. It is probably 65 or 70 miles from Cleveland and Ashtabula to the valleys.

It is a 60-cent rate from the Lakes to Wheeling. The short line distance from Cleveland to Wheeling would be 130 miles, at 60 cents per gross ton. It is 50 cents, Toledo to South Columbus. That is about 123 miles. It is 90 cents from Toledo to Hanging Rock, Ashland, and Ironton district, the Ohio River district. That is 260 miles.

The **Chairman**. I believe I asked you the percentage of ore carried by the Pittsburgh Steamship Co.

Mr. **Freer**. I said it was approximately 33⅓ per cent, something in that neighborhood.

Mr. **Young**. You mean all of the ore brought down to the Lakes?

Mr. **Freer**. Yes.

Mr. **Reed**. What year is that?

The **Chairman**. 1910, he said.

Mr. **Freer**. I did not have the figures at that time. I have some figures here now, which show it to be about 30 per cent.

The **Chairman**. What are those figures?

Mr. **Freer**. The iron ore tonnage handled by the Pittsburgh Steamship Co. in 1910 was 13,430,000 tons.

The **Chairman**. By the way, I wish you would show that statement to Mr. Reed. He is quoting now, Mr. Reed, from the statements made up by the Steel Corporation.

Mr. FREER. I did not have those figures this morning, and I simply estimated it at about one-third. The total tonnage in 1910 was in round numbers 43,000,000, and this shows the Pittsburgh Steamship Co. handled 13,400,000 tons.

The CHAIRMAN. This steamship company is a subsidiary of the United States Steamship Co.?

Mr. FREER. That is the way I understand it; yes, sir.

The CHAIRMAN. Is the shipment of ore controlled to any extent and to what extent, by the United States Steel Corporation, or this steamship company?

Mr. FREER. Is it controlled by them?

The CHAIRMAN. Yes.

Mr. FREER. They control it to the extent they carry it.

The CHAIRMAN. Do you know anything about the return shipments of coal and the like?

Mr. FREER. Well, the same vessels which carry the ore carry the coal from the lower lake ports back to Superior and Lake Michigan ports.

The CHAIRMAN. Do you know whether all of the Steel Corporation tonnage is carried in its own bottoms or not?

Mr. FREER. I understand not.

The CHAIRMAN. Do you know what per cent is not carried in its own bottoms, from those figures?

Mr. FREER. From these figures?

The CHAIRMAN. Yes.

Mr. FREER. About 34 per cent of this tonnage is not carried by the steamship company. That is in the year 1910.

The CHAIRMAN. Do these vessels carrying ore load back with coal to the Northwest?

Mr. FREER. Yes, they handle the coal back—not the same quantity of coal back as ore coming down, however. In other words, the vessel does not always have coal.

The CHAIRMAN. How does the ore movement down compare with the coal movement back, in volume?

Mr. FREER. Well, there is over twice as much ore down. Taking the year 1910, the latest year for which I have any figures, there were about 20,000,000 tons of coal moved up the lake as against 43,000,000 tons of ore coming down.

The CHAIRMAN. Is this coal for the lake movement received at the same ports as the ore?

Mr. FREER. Coal is handled at the same ports as the ore; yes, sir.

The CHAIRMAN. Do you know what the rate on coal is from Lake Erie ports, for instance, to Lake Supreior docks?

Mr. FREER. There are varying rates. The open rate has been 35 cents a ton. There have been contract rates that ran below that and some rates that were higher than that.

The CHAIRMAN. How long has that approximate rate of 35 cents a ton been in effect?

Mr. FREER. Several years; three or four years.

The CHAIRMAN. I believe you stated the charge on ore down was 65 cents.

Mr. FREER. Sixty-five cents, as I understand the rate to be, down.

The CHAIRMAN Is this coal rate a net rate or is there something to come out of it for loading and unloading?

Mr. FREER. That is net to the vessel.

The CHAIRMAN. Are there any deductions from the ore rate of 65 cents a ton?

Mr. FREER. There is an unloading charge of 15 cents to the dock company out of that rate.

The CHAIRMAN. Explain to the committee what these deductions are, in your own way.

Mr. FREER. The 35-cent rate is net to the vessel, and out of the ore rate they pay the dock company at the Lake Erie port 15 cents a ton for unloading.

The CHAIRMAN. Then the net rate on coal to the vessel is how much?

Mr. FREER. On the 35-cent rate it would be 35 cents net; on the 30-cent contract rate it would be 30 cents. It ranges from 30 to 35 cents net to the vessel.

The CHAIRMAN. Have you any information which would show or tend to show, for the benefit of the committee, anything as to the reasonableness of the rates charged on this water carriage of ore?

Mr. FREER. All I have on that is the report showing what profit there is in the transporation of the ore.

Mr. REED. I object to that for the same reasons I objected to the opinion of this same witness this morning.

The CHAIRMAN. It is the same question.

Mr. REED. Yes.

The CHAIRMAN. I do not suppose we need another vote on it, as we have already passed on it. You may proceed, Mr. Freer.

Mr. FREER. This is the statement of profit and loss of the Pittsburgh Steamship Co.'s business for the year 1910.

The CHAIRMAN. Right at that point, show those figures to Mr. Reed, please. Those are the figures furnished by the Steel Corporation as to its operations, and are now in Mr. MacRea's report. That is true, is it not, Mr. Reed?

Mr. REED. I presume so, if they furnished them.

The CHAIRMAN. They are the figures that were furnished. I thought maybe you might recognize the exhibit. Go ahead, Mr. Freer.

Mr. FREER. That shows for the year 1910 the earnings——

The CHAIRMAN. State what the exhibit shows, so that the stenographer can catch it and that it may be put into the record.

Mr. FREER. It is an exhibit showing the profit and loss, Pittsburgh Steamship Co., for the year 1910.

The statement referred to is in the words and figures following, to wit:

Pittsburgh Steamship Co. profit and loss statement for 1910.

Gross earnings from operations:	
Ore freights	$9,862,138.39
Coal freights	506,400.50
Sundry freights	1,572.50
	10,370,211.39
Operating expenses	6,710,898.16
Balance	3,659,313.23
Miscellaneous gains and losses	431,111.18
Other income	77,688.37
Total income	4,168,112.78

Interest charges	$648,899.86	
Depreciation and extinguishment funds, bond sinking funds, extraordinary replacements, etc	993,729.99	$1,642,629.85
Net earnings, as stated		2,525,482.93
Capital stock		7,880,000.00
Bonded mortgages and other capital debt		12,704,000.00

The Chairman. You have also another statement there as to tonnage.

Mr. Freer. You wish that to go into the record, also?

The Chairman. Yes.

Mr. Freer. This is a letter from D. A. Reed, giving a statement of the tonnage of the Pittsburgh Steamship Co. for the year 1910.

The Chairman. Just read it into the record.

Mr. Freer (reading):

Pittsburgh, *March 2, 1912.*

Hon. A. O. Stanley,
Washington, D. C.

Dear Sir: I am advised to-day by the Pittsburgh Steamship Co. that the total tonnage carried by its vessels during the season of 1910 was as follows:

Iron ore	gross tons	13,430,100
Coal	net tons	1,470,781
Coke	do	25

No miscellaneous freight.

Very truly, yours,

D. A. Reed.

The Chairman. You may proceed and give the deductions from those figures I asked for.

Mr. Freer. From this report of the Pittsburgh Steamship Co. as to its profit and loss for the year 1910, applying to that the tonnage shown in this letter which has just been read, I figure that there was a profit of 24½ cents a ton to the steamship company in the handling of the ore.

The Chairman. Explain how you reach that conclusion.

Mr. Freer. I have simply taken the net earnings of the company and divided it by the number of tons handled of iron ore. That is assuming there is no profit on the coal and coke.

The Chairman. Thirty-five cents a ton?

Mr. Freer. That the coal and coke is handled without profit. The profit in handling the coal and coke of course is in the fact it reduces the operating expense which would otherwise be chargeable to the ore, if all the vessels went back light.

Mr. Young. By the profit you mean the profit over operating expenses?

Mr. Freer. The profit over operating expenses; yes, sir.

Mr. Reed. And that profit which you speak of is about 10 per cent or 12 per cent of the total capitalization, is it not?

Mr. Freer. Total capitalization? Let me see. The total capitalization is twenty and a half million. No, it is much over that.

The Chairman. A little louder, please.

Mr. Freer. I say it is over 10 per cent.

Mr. Reed. What per cent is it? The chairman will pardon my interjecting.

The Chairman. All right. Ordinarily I would prefer the committee to examine, but those are matters of arithmetic.

Mr. REED. That will come out as we go along.

The CHAIRMAN. And it is better to get them straight in the record.

Mr. FREER. It is 16 per cent which that would figure on the entire capitalization, both the capital stock and the bonds.

Mr. YOUNG. What was the rate paid on that ore, the rate per ton?

Mr. FREER. About 73 cents, figured from their statement, as to the number of tons handled and the receipts from ore.

Mr. GARDNER. That is from the western ports of Lake Superior and the lower lake ports?

Mr. FREER. Yes.

Mr. YOUNG. That is all the ore they handle, is it not?

Mr. FREER. That is all the ore they handled.

Mr. YOUNG. That would include the ore from Two Harbors, from Duluth, from Superior, from Ashland, and Marquette?

Mr. FREER. Yes, sir; it includes all the ore.

Mr. YOUNG. Does it include any Escanaba ore?

Mr. FREER. I can not tell from this statement. It included all the ore that was handled by the Pittsburgh Steamship Co.

The CHAIRMAN. Have you any other information besides the figures which have been handed you there, furnished the committee by the United States Steel Corporation, which confirm your opinion in this respect?

Mr. REED. Mr. Chairman, the witness has not expressed any opinion on this rate.

The CHAIRMAN. Well, on these estimates, and as to the profits on the transportation of this ore.

Mr. GARDNER. But the witness has not expressed any opinion on the profits in the transportation of ore by water, as yet, has he, Mr. Chairman?

The CHAIRMAN. Yes.

Mr. GARDNER. I have not heard it.

Mr. REED. I have not heard it.

The CHAIRMAN. He said how much it cost and how much profit was made.

Mr. YOUNG. Oh, yes; those were figures taken from this statement.

Mr. GARDNER. I would like to have the question of the chairman read.

The stenographer read as follows:

> The CHAIRMAN. Have you any other information besides the figures which have been handed you there, furnished to the committee by the United States Steel Corporation, which confirm your opinion in this respect?

Mr. GARDNER. What opinion?

The CHAIRMAN. As to the cost of transportation and as to the profit. I am not wedded to the word "opinion"—his conclusion.

Mr. GARDNER. I wanted to know whether it was his opinion as to the reasonableness of the rate, or whether it was his opinion as to whether this was a fair estimate of the cost and whether it was a fair estimate of the profits. That he may not have expressed an opinion concerning, but in regard to his opinion as to the reasonableness of the rate, I have not heard him express an opinion. I have heard him express what are the costs and what may correctly be the profits, but I have not heard him express an opinion as to whether they were reasonable or not.

The CHAIRMAN. Have you any other information as to the cost of transportation and as to the profit made, and what other commodities can be or are transported over this same course, this same water way.

Mr. FREER. The only other commodity, of course, is coal, and the coal is not considered to be a tonnage on which they expect to make a profit. It is simply tonnage to reduce the expense which would otherwise accrue against the ore, so that the 30 or 35 cent rate which is made on the coal for the north-bound movement would not be a rate with which it would be fair to compare.

The CHAIRMAN. Do you know what the charge on other tonnage is, on wheat or other commodities?

Mr. FREER. No. I have had information a number of years ago from some of the vessel people as to the ore, but I would not care to put it in the record because I was not particularly interested. It was just given me in conversation. I do not know how accurate it was.

Mr. GARDNER. Who carries the other two-thirds of that ore that is carried on the lakes?

Mr. FREER. There are a number of lake transportation companies.

Mr. GARDNER. Do they charge the same rates as this Pittsburgh Steamship Co.?

Mr. FREER. I don't know as to that. The rates vary. I had a statement some time ago as to the ore rate. And the coal rates, the same; they fluctuate from day to day. There is a contract rate, and then there is an open rate which changes throughout the season, depending on the offerings.

Mr. GARDNER. You never made any comparison to see whether the rates charged by the Pittsburgh Steamship Co. were higher or lower than those that were charged by their competitors?

Mr. FREER. No, sir; I have assumed that the rates are about the same—that they would necessarily be about the same.

Mr. GARDNER. It would seem to me so.

Mr. REED. May I suggest to the committee also that practically all the competitors of the Steel Corporation own their own vessels, just as the corporation does.

Mr. GARDNER. That is, the corporation does not carry any appreciable amount of ore for its competitors?

Mr. REED. I believe not.

Mr. YOUNG. It does not carry all the ore it produces itself.

Mr. REED. I understand it does not carry any for other parties, and that the Lackawanna, Jones & Laughlin, the Republic, and the other companies all have their own fleets.

Mr. GARDNER. Then so far as Lake transportation is concerned it does not seem to me that the United States Steel Corporation gets any advantage from owning that transportation that is not open to its competitors as well. Is that your view of the case, Mr. Freer?

Mr. FREER. That would be true if all its competitors owned their own fleets.

The CHAIRMAN. How about the Republic Iron & Steel Co.?

Mr. FREER. How about the Republic Iron & Steel Co.?

The CHAIRMAN. Yes.

Mr. YOUNG. We had their general manager here a moment ago; he could tell you that.

Mr. FREER. I could not tell you what percentage do own their own fleets; I do not know. I know that some of them do, but how many I do not know.

Mr. Gardner. Even if they do not all own their own fleets, if they have access to two-thirds of the carrying capacity of the Lakes, and they are not charged any higher rates by that two-thirds of the carrying capacity, outside of that controlled by the Steel Corporation, so far as the water transportation is concerned there is no advantage to them over their competitors.

Mr. Freer. On the rates they pay?

Mr. Gardner. On the water rates. I mean to say, one of the things that is working in our minds is to find out whether the transportation rates charged by the subsidiaries of the Steel Corporation by being put high give an undue advantage to the Steel Corporation over their competitors. But it does not seem to me from your statement of the case that there is any unfair advantage so far as water transportation is concerned. Whether there is an unfair advantage on land would depend on whether the land rates were or were not reasonable because in a great many cases they are noncompetitive rates

Mr. Freer. I would not say there is an unfair advantage, but if the Steel Corporation handles the bulk of its own ore in its own vessels and makes a profit, there is an advantage to the extent that somebody else does not make that proft.

Mr. Gardner. That might be so. But if one concern makes knives and another concern makes the kinves and the steel out of which the knives are made, that means a greater investment but it is not what I would call an unreasonable advantage.

Mr. Freer. I would not say that is an unfair advantage, but it is an advantage to that extent, of course.

Mr. Gardner. There is an advantage perhaps to a livery stable in Washington if they raise their own hay.

The Chairman. To the extent, as I understand it, that other concerns than the Steel Corporation own vessels, they are relieved from the effect of any excessive charge by the vessels of the Steel Corporation. It is only of course those concerns that either have to transport their ore in vessels of the Steel Corporation, or transport their ore in vessels charging a similar rate that are affected by this rate.

Mr. Freer. If I gather your full question, I understand that that is correct; yes, sir.

The Chairman. No matter if they charge a rate of $5 a ton, if some other fellow was operating a boat and hauling his own ore, he would not be affected by this rate, of course.

Mr. Freer. No.

Mr. Gardner. Nor would enybody else if the rates were uniform, and there were plenty of competitors he could go to.

Mr. Young. You are familiar with this Lake situation, are you?

Mr. Freer. I am not very familiar with it, Mr. Young. The information I have has come to me incidentally in these coal investigations.

Mr. Young. Do you know who the large shippers are out there, besides the Steel Corporation?

Mr. Freer. I could name some of them. I would not attempt to name them in order.

Mr. Young. I will ask you, for instance, do not Corrigan, McKinney & Co. own their own fleet?

Mr. Freer. I understand they do.

Mr. Young. Do not the Cleveland-Cliffs Co. own their own fleet?

Mr. Freer. I understand so.

Mr. Young. Do not Jones & Laughlin own their own fleet?

Mr. FREER. I am not certain; I think they do.

Mr. YOUNG. Well, they built some new boats this last season. Do not Pickands, Mather & Co. own some boats in which to handle their own ore?

Mr. FREER. I understand so.

Mr. YOUNG. Do not M. A. Hanna & Co. own some boats?

Mr. FREER. I think so.

Mr. YOUNG. So practically all those ore companies own boats, do they not, in which to carry all or a part of their ore?

Mr. FREER. Practically all the ore companies do, I understand.

Mr. YOUNG. Is it not a fact that the Steel Corporation carries substantially no ore for anybody else, and that it does not even carry all of its own?

Mr. FREER. It carries about two-thirds of its own ore, and practically none for any outside interests.

There is a little, I understand, that they occasionally handle for other people.

Mr. YOUNG. Do these outside companies own their own docks, too?

Mr. FREER. Some of them do—that is, some of them operate docks.

The CHAIRMAN. Right there, does any outside company own docks at Superior or Duluth and Two Harbors?

Mr. FREER. Not that I know of.

Mr. YOUNG. That is all charged in the rail freight?

Mr. FREER. Yes, sir.

The CHAIRMAN. Do you know about the operation of those docks, whether they have the privilege or not of designating what boats shall take its cargo, and when?

Mr. FREER. The docks in the Northwest?

The CHAIRMAN. Yes.

Mr. FREER. I assume that would be so; that they would have to have that in order to regulate their own business.

The CHAIRMAN. What is the tonnage of a vessel, do you know?

Mr. FREER. Oh, it varies. I think these new boats are from twelve to fourteen thousand tons—these recent ones that were built.

Mr. YOUNG. Only two of those would run up to 14,000 tons.

The CHAIRMAN. Who operates the ore docks on Lake Erie?

Mr. FREER. They are operated by various companies. Some are operated directly by the railroads and some are operated by the coal and ore people.

The CHAIRMAN. Who operates the dock at Conneaut?

Mr. FREER. That is operated by the Pittsburgh & Conneaut Co.

The CHAIRMAN. That is a subsidiary of the Steel Corporation?

Mr. FREER. I understand so.

The CHAIRMAN. Is that a large dock?

Mr. FREER. That is quite a large dock. It handles quite a large tonnage there.

The CHAIRMAN. Do you know the tonnage of ore passing over that dock?

Mr. REED. In what year?

The CHAIRMAN. In 1910.

Mr. FREER. About six and a half million, I think, possibly.

Mr. REED. Seven million.

Mr. FREER. Six million three hundred and nine thousand gross tons.

Mr. REED. Where do you get those figures?

The CHAIRMAN. He is now about to quote from some exhibits, part of which are filed in Mr. MacRae's report, that were furnished by your various companies.

Mr. REED. I notice your plan shows 7,000,000 tons in 1910?

The CHAIRMAN. Yes, that is net tons. Those are Mr. Boileau's figures. I know nothing about them.

Mr. FREER. Possibly the difference may be between the gross and net. In the Bessemer & Lake Erie report it shows the ore, 6,441,000 gross tons and 7,214,000 net tons. It shows it both ways. I do not know what this report is. Do you want me to read this? This is from a report of the Pittsburgh & Conneaut Dock Co., Conneaut Harbor, Ohio, a statement showing the tonnages handled during the year.

The statement referred to is in the words and figures following, to wit:

THE PITTSBURGH & CONNEAUT DOCK CO., CONNEAUT HARBOR, OHIO.

Statement showing tonnages handled during the year ended Dec. 31. 1910.

		Tons.
Ore unloaded from vessels		6, 309, 548
Ore loaded on cars direct from vessels	5, 375, 275	
Ore loaded on cars from dock	1, 066, 248	
Total ore loaded on cars		6, 441, 523
Cement loaded on vessels		18, 962
Cargo coal loaded on vessels		616, 429
Cargo coke loaded on vessels		204
Steel rails loaded on vessels		21, 907
Structural steel loaded on vessels		1, 991
Coal sold to vessels for fuel		136, 505

Profit and loss statement for 1910.

Gross earnings from operations:		
Unloading ore from vessels	$1, 344, 455. 25	
Loading ore on cars	276, 518. 14	
Loading cars on vessels	25, 912. 42	
Loading steel rails, etc., on vessels	15, 620. 04	
		$1, 662, 505. 85
Operating expenses		772, 136. 51
Balance		940, 369. 34
Miscellaneous gains and losses		91, 699. 82
Other income		9, 603. 28
Total income		1, 041, 672. 44
Less extinguishment funds, extraordinary replacements, etc		100, 000. 00
Net earnings as reported		941, 672. 44
Capital stock		100, 000. 00

The CHAIRMAN. What are the charges made at present by the dock company for handling ore, from the vessel to the cars?

Mr. YOUNG. Which dock company?

The CHAIRMAN. This Conneaut Company.

Mr. FREER. As I understand it, the vessel company pays the dock company 15 cents a ton. Then the railroad pays to the dock company 2 cents additional per ton for ore that is loaded direct into the car and 10 cents per ton in addition to the vessel payment on ore which is put on the dock and reloaded to the car.

The CHAIRMAN. There is an additional charge then for the handling of ore from the dock to the car?

Mr. Freer. Yes. That is if first put on the dock, it is 8 cents more.

The Chairman. Do you know what is the cost per ton of handling this ore from the vessel to the car, or from the vessel to the dock and then from the dock to the car?

Mr. Freer. Only as I can gather that information from this report which I have here.

The Chairman. Well, those are figures furnished by the Steel Corporation.

Mr. Freer. This report of the Pittsburg & Conneaut Dock Co., profit and loss statement for the year 1910, in connection with the other statement of tonnage handled for the year 1910—from them I figure there was a profit of about 14¾ cents a ton.

The Chairman. What is the charge made for that service?

Mr. Freer. I will have to figure that, because the charge differs on the direct ore and on the ore that is put on the dock.

The charge was in the neighborhood of about 19 cents, as near as I can tell from these figures.

The Chairman. What charge is made for the handling of ore to the dock for storage?

Mr. Freer. To the dock for storage?

The Chairman. Yes.

Mr. Freer. There is a charge paid to the vessel which is uniform, and then the ore which is put on the dock for storage, when it is reloaded, 10 cents a ton charge is made against that.

The Chairman. That is, when it is taken from the pile on the dock and put into the car there is a charge of 10 cents a ton?

Mr. Freer. Yes. If it is loaded direct into the car without going on the dock, it is 2 cents a ton.

Mr. Reed. Might I suggest you ask the witness whether in figuring on these earnings he allows anything for depreciation of machinery or items of that sort.

The Chairman. Is there a depreciation charge figured in there?

Mr. Freer. Yes; it is shown on their statement.

Mr. Reed. I notice you figure this on the net earnings before deduction of depreciation.

Mr. Freer. But you have an item in here for extinguishment funds and extraordinary replacements. That offsets your miscellaneous gains and losses, so that your net amount here agrees practically with the net amount above. You have $940,369 up there [indicating], and you have $941,000 down here [indicating], after allowing for your extinguishment funds.

Mr. Reed. Yes; but you figure in the miscellaneous gains as part of the profit on ore.

Mr. Freer. That is true; I have done that.

The Chairman. Have you a report there of the Pennsylvania & Ohio Dock Co.?

Mr. Young. The witness, I take it, wants to make a correction there in his last statement.

Mr. Freer. There is $100,000 in there which should come out. I have figured the one hundred thousand would offset the other hundred thousand.

Mr. Young. That would make quite a difference on 13,000,000 tons, would it not?

Mr. Reed. It makes a difference of 10 or 15 per cent.

Mr. FREER. How many tons did you say?

Mr. YOUNG. I should have said 6,300,000 tons.

Mr. REED. In addition to that, Mr. Freer is counting in the income that the dock company makes from handling cement, coal, and finished steel. He is adding all that in and dividing it by the number of tons of ore that were handled.

Mr. YOUNG. If you don't look out you will make a loss there when you make those deductions.

Mr. FREER. Deducting the one hundred thousand makes a difference of a little over a cent; that is all.

The CHAIRMAN. What is this item of $941,000?

Mr. FREER. $941,672 gives the net earnings. They are specified as net earnings, but they are not exactly net earnings, because out of that they have allowed for extinguishment funds and extraordinary replacements, etc.

Mr. YOUNG. How much?

Mr. FREER. $100,000.

Mr. YOUNG. Do they show how much income? There was some other business besides the ore business.

Mr. FREER. They show miscellaneous gains and losses—but it is gains—$91,699; then miscellaneous income, $9,600, making $100,000, which I just deducted from this to make $841,000 instead of $941,000, which I first used.

Mr. YOUNG. There are two items, Mr. Chairman—loading cars on vessels and loading steel rails, and so forth. That is stuff going the other way. That ought not to be figured in this.

Mr. FREER. That reduces it to an even $800,000.

Mr. YOUNG. How does that figure out per ton?

Mr. FREER. It would be 12.7 cents, deducting everything else.

The CHAIRMAN. What is that 12.7 cents? A profit?

Mr. FREER. A profit.

The CHAIRMAN. What is the charge for that service per ton?

Mr. FREER. I can not tell you exactly. It would be approximately 18½ or 19 cents a ton; that is, on the average. That includes a part of it which was put on the dock and a part of it which was loaded directly into the cars.

The CHAIRMAN. Does it show how much was put into the docks?

Mr. FREER. Yes; practically one-sixth of it on the dock and five-sixth loaded direct into the cars.

Mr. REED. I might say at this point that this matter is also under consideration now by the Interstate Commerce Commission. Commissioner Lane has just finished making a study of this whole subject.

The CHAIRMAN. Is this the dock company that was indicted?

Mr. REED. This is one of the dock companies that were indicted.

The CHAIRMAN. For what?

Mr. REED. On the cheapest technicality that was ever preferred——

The CHAIRMAN. What was the charge?

Mr. REED. The charge was that it had refunded to consignees a part of this allowance that was made by the railroad. Every other dock company along the Lakes has done it for the last 10 or 15 years. Just because it was not published in the tariff they all were indicted for it.

The CHAIRMAN. The consignee in this case was the United States Steel Corporation?

Mr. REED. In this particular case it was, but every other consignee in the iron business got the same allowance.

The CHAIRMAN. What was dock charge in 1899 for unloading?

Mr. FREER. What was it in 1899?

The CHAIRMAN. Yes; for the unloading.

Mr. FREER. In 1899?

The CHAIRMAN. Yes.

Mr. FREER. I could not tell you.

The CHAIRMAN. No?

Mr. FREER. No, sir.

Mr. YOUNG. 1899?

Mr. FREER. 1899—I am not certain whether it was or not.

The CHAIRMAN. What is the dock charge for loading at this time—20 cents a ton?

Mr. FREER. Fifteen cents plus 2 cents, and 15 cents plus 10 cents.

The CHAIRMAN. Do you know what the rate was in 1899?

Mr. FREER. I do not; no, sir.

The CHAIRMAN. Is a dock company like a plant facility or like any other terminal facility or freight station in its operation?

Mr. GARDNER. I think, before you ask that question, you ought to ask the witness if he knows what is meant by a "plant facility."

The CHAIRMAN. I assumed he did. Do you know what is meant by a plant facility?

Mr. FREER. There has been a good deal of talk about a plant facility. I do not know whether I know what it means or not. I have my own idea of what it means. I have never seen a description as to what it actually does mean.

Mr. GARDNER. That is all I wanted to find out.

The CHAIRMAN. Do you know what is meant by a "plant facility" in common parlance?

Mr. FREER. I think I know what is commonly meant by a "plant facility;" yes, sir.

The CHAIRMAN. Explain to the committee whether or not a dock is a terminal facility.

Mr. FREER. It is a terminal facility; yes, sir.

Mr. GARDNER. Would the witness consider a railroad which went from Lake Erie to the neighborhood of Pittsburgh a plant facility?

Mr. FREER. Would I consider that?

Mr. GARDNER. Yes.

Mr. FREER. I can conceive extraordinary circumstances under which it might be, but I do not know of any railroad to-day that I would consider a plant facility, running from Lake Erie to Pittsburgh. If I should find a railroad that was not handling any other business except the business of one particular plant, and that plant owned it, I might say that was a case where it was a plant facility; but I do not know of any such railroad.

The CHAIRMAN. Did these charges for loading and unloading go into the railroad earnings? I mean, were they tabulated with the earnings of the railroad—these dock charges?

Mr. FREER. No, sir; I understand not. That is a separate company entirely.

The CHAIRMAN. Would the traffic sheet which has been explained here not include these docking charges that I have been talking about and about which you have been testifying?

Mr. FREER. What will not include that? I did not get that.

The Chairman. These dock charges for loading and unloading at Conneaut.

Mr. Freer. Are not included in what?

The Chairman. In the tabulations showing their earnings.

Mr. Freer. Of the railroads?

The Chairman. Yes, sir.

Mr. Freer. No, sir; they would not be embraced in the railroad's earnings.

The Chairman. Does any other concern unload at Conneaut except the Steel Corporation?

Mr. Freer. Does any other concern unload ore except the Steel Corporation?

The Chairman. Yes.

Mr. Freer. At Conneaut?

The Chairman. Yes.

Mr. Freer. No, sir.

The Chairman. Are the charges the same as at the other docks?

Mr. Freer. I understand they are uniform at all the Lake Erie ports.

The Chairman. Over what line is ore transported from Conneaut Harbor to Pittsburgh, say?

Mr. Freer. The Bessemer & Lake Erie.

The Chairman. What points does the Bessemer & Lake Erie serve with ore?

Mr. Freer. The Pittsburgh district only.

The Chairman. What is the rate, or what are the rates, on ore to Pittsburgh over this rail?

Mr. Freer. Ninety-six cents on the direct ore and $1.04 on the dock ore, making a net charge to the railroad of 94 cents on all the ore.

The Chairman. Do you know the distance of this haul by the Bessemer & Lake Erie from Conneaut to the Pittsburgh district?

Mr. Freer. I could not tell you accurately. It is about 140 miles. That is the approximate distance.

The Chairman. I hand you a statement prepared by the Interstate Commerce Commission from the report of the Bessemer & Lake Erie Railroad for the years ending June 30, 1911, to 1902. I will ask you to look at that statement and inform the committee what that report shows with respect to traffic and transportation conditions and revenues of the railroad.

Mr. Freer. This is a statement similar to the ones we had this morning. It shows the capital stock, funded debt, mileage, operating revenues and expenses, and net income and dividends; also the traffic statistics as to the number of tons handled, the average haul, and the average revenue. Attached to that is a classified statement of the tonnage, classified by commodities.

The Chairman. What per cent is iron ore?

Mr. Freer. It is not figured out here. I can get it very quickly, I guess—a little over 60 per cent.

The Chairman. How much are the net earnings of that road?

Mr. Freer. The net earnings?

The Chairman. For 1910?

Mr. Freer. For 1910 the net earnings were $3,728,000. That is, the net revenue.

The statement referred to is as follows:

Statement compiled from annual reports of the Bessemer & Lake Erie R. R. Co.[1] *to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.*[2]

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$500,000	$500,000	$500,000	$500,000
Funded debt outstanding at end of year	$4,540,000	$4,030,000	$4,070,000	$3,530,000
Single-track mileage owned at end of year—main line	8.87	8.87	8.87	8.87
Total single-track mileage operated at end of year	212.54	213.41	210.05	210.05
Total operating revenues	$7,518,628.00	$7,888,021.31	$6,060,454.16	$5,352,043.36
Total operating expenses	$4,839,321.26	$4,159,663.80	$3,540,958.59	$3,223,926.93
Total net revenue	$2,679,306.74	$3,728,357.51	$2,519,495.57	$2,128,116.48
Net corporate income	$499,590.95	$1,672,529.99	$779,339.31	$404,189.53
Other disbursements from net corporate income				$630,000.00
Balance for year carried forward to credit of profit and loss	$499,590.95	$1,672,529.99	$779,339.31	[3] $225,810.42
Dividends declared from surplus	$750,000.00	$750,000.00	$250,000.00	
Rate per cent of dividend	150	150	50	
TRAFFIC AND MILEAGE STATISTICS.				
Passenger traffic:				
1. Number of passengers carried earning revenue	1,139,171	1,040,989	940,763	906,143
2. Number of passengers carried 1 mile	24,454,760	20,664,233	17,830,211	17,761,873
3. Number of passengers carried 1 mile per mile of road	120,070	101,028	88,628	88,288
4. Average distance carried (miles)	21.47	19.85	18.95	19.60
5. Total passenger revenue	$352,629.75	$322,045.46	$296,483.82	$293,536.42
6. Average amount received from each passenger (cents)	30.955	30.936	31.515	32.394
7. Average receipts per passenger per mile (cents)	01.442	01.558	01.663	01.653
8. Total passenger service train revenue	$415,511.57	$381,299.28	$349,381.42	$340,199.63
9. Passenger service train revenue per mile of road	$2,040.12	$1,864.18	$1,736.66	$1,691.02
10. Passenger service train revenue per train-mile (cents)	82.088	74.850	71.445	73.646
Freight traffic:				
11. Number of tons carried of freight-earning revenue	13,275,029	13,945,976	10,817,137	9,510,071
12. Number of tons carried 1 mile	1,559,708,881	1,646,791,543	1,307,403,916	1,119,508,822
13. Number of tons carried 1 mile per mile of road	7,658,020	8,051,196	6,498,677	5,564,712
14. Average distance haul of 1 ton (miles)	117.49	118.08	120.86	117.72
15. Total freight revenue	$7,059,085.07	$7,459,484.55	$5,698,051.31	$4,964,504.53
16. Average amount received for each ton of freight (cents)	53.176	53.488	52.676	52.203
17. Average receipts per ton per mile (cents)	.452	.453	.436	.443
18. Freight revenue per mile of road	$34,659.42	$36,469.56	$28,323.15	$24,676.93
19. Freight revenue per train-mile	$4.38389	$4.63602	$4.06145	$4.02053
Total traffic:				
20. Operating revenues	$7,518,628.00	$7,888,021.31	$6,060,454.16	$5,352,043.36
21. Operating revenues per mile of road	$36,915.74	$38,564.69	$30,124.54	$26,603.26
22. Operating revenues per train-mile	$3.58260	$3.75223	$3.23009	$3.20461
23. Operating expenses	$4,839,321.26	$4,159,663.80	$3,540,958.59	$3,223,926.93
24. Operating expenses per mile of road	$23,760.60	$20,336.68	$17,600.95	$16,025.09
25. Operating expenses per train-mile	$2.30592	$1.97870	$1.88726	$1.93087
26. Net operating revenue	$2,679,306.74	$3,728,357.51	$2,519,495.57	$2,128,116.48
27. Net operating revenue per mile of road	$13,155.14	$18,228.01	$12,523.58	$10,578.17

28. Average number of passengers per car-mile	13	15	14	12
29. Average number of passengers per train-mile	48	41	36	38
30. Average number of passenger cars per train-mile	3.63	3.37	3.33	3.30
31. Average number of tons of freight per loaded car-mile	42.37	41.77	42.57	40.29
32. Average number of tons of freight per train-mile	968.62	1,023.47	931.89	906.64
33. Average number of freight cars per train-mile	36.80	37.46	36.35	34.60
34. Average number of loaded cars per train-mile	22.86	24.50	21.89	22.50
35. Average number of empty cars per train-mile	12.78	11.80	13.35	10.98
36. Average mileage operated during year	203.67	204.54	201.18	201.18

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
Funded debt outstanding at end of year	$3,530,000	$2,430,000	$1,395,000	$1,370,000	$1,370,000	$1,000,000
Single-track mileage owned at end of year—main line	8.87	8.87	8.87	8.87	8.87	8.87
Total single-track mileage operated at end of year	210.05	210.50	212.90	244.28	240.94	235.60
Total gross earnings from operation	$6,399,323.16	$5,908,039.39	$5,123,951.28	$3,560,613.29	$4,273,064.88	$3,414,220.78
Total operating expenses	$3,341,622.80	$2,812,493.44	$2,438,376.88	$2,047,622.89	$2,479,976.56	$1,745,857.17
Income from operation	$3,057,700.36	$2,895,545.95	$2,685,574.40	$1,512,990.40	$1,793,088.32	$1,668,363.61
Net income	$500,903.03	$839,318.60	$948,472.81	$256,203.61	$252,242.41	$323,556.30
Dividends	$200,000.00	....	$250,000.00	$500,000.00	....	....
Rate per cent of dividend	40	....	50	100	....	....
Surplus from operations of year	$300,903.03	$839,318.60	$698,472.81	[3] $243,796.39	$252,242.41	$323,556.30
TRAFFIC AND MILEAGE STATISTICS.						
Passenger traffic:						
1. Number of passengers carried earning revenue	788,520	648,357	576,179	567,389	548,368	482,366
2. Number of passengers carried 1 mile	16,544,860	15,092,687	13,189,271	13,053,826	12,882,547	11,378,105
3. Number of passengers carried 1 mile per mile of road	82,239	74,853	64,643	56,642	63,140	55,766
4. Average distance carried (miles)	20.98	23.28	22.89	23.01	23.49	23.59
5. Total passenger revenue	$304,748.50	$272,812.18	$248,024.51	$236,602.24	$228,814.77	$200,083.85
6. Average amount received from each passenger (cents)	38.648	42.077	43.046	41.700	41.726	41.480
7. Average receipts per passenger per mile (cents)	1.842	1.808	1.880	1.813	1.776	1.758
8. Total passenger earnings	$334,292.70	$301,145.92	$273,149.75	$263,783.47	$255,280.23	$229,324.12
9. Passenger earnings per mile of road	$1,661.66	$1,493.56	$1,338.77	$1,144.60	$1,251.19	$1,123.97
10. Passenger earnings per train-mile (cents)	70.181	73.093	67.432	63.979	62.162	56.758

[1] The annual reports of this company for the year 1908 and for subsequent years indicate that it was controlled by the Carnegie Steel Co.; this information was not given or called for in reports for prior years. The annual reports for 1909 and 1908 indicate that the Bessemer & Lake Erie R. R. Co. jointly, with the Pere Marquette R. R. Co., controlled the Marquette & Bessemer Dock & Navigation Co. Information with respect to transportation companies controlled not given or called for in reports for years prior to 1908. The annual reports for 1911 to 1902 indicate that the Bessemer & Lake Erie R. R. Co. operated the Pittsburgh, Bessemer & Lake Erie R. R. and the Meadville, Conneaut Lake & Linesville R. R.

[2] For some items the figures shown for 1908 and for subsequent years are not fully comparable with those shown for 1907 and for prior years, because of changes in classifications and report forms.

[3] Represents deficit.

Statement compiled from annual reports of the Bessemer & Lake Erie R. R. Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1907	1906	1905	1904	1903	1902
TRAFFIC AND MILEAGE STATISTICS—continued.						
Freight traffic:						
11. Number of tons carried of freight-earning revenue	11,002,590	10,034,072	8,814,230	5,818,955	7,188,119	5,992,421
12. Number of tons carried 1 mile	1,328,386,167	1,226,797,840	1,100,272,336	701,352,545	908,358,960	766,854,180
13. Number of tons carried 1 mile per mile of road	6,602,973	6,084,401	5,392,698	3,043,272	4,452,085	3,758,536
14. Average distance haul of 1 ton (miles)	120.73	122.26	124.83	120.53	126.37	127.97
15. Total freight revenue	$5,828,153.55	$5,281,929.33	$4,760,845.81	$3,123,782.16	$3,890,134.43	$3,051,738.53
16. Average amount received for each ton of freight (cents)	52.971	52.640	54.013	53.683	54.119	50.927
17. Average receipts per ton per mile (cents)	.439	.430	.433	.445	.428	.398
18. Total freight earnings	$5,828,153.55	$5,281,929.33	$4,760,845.81	$3,123,782.16	$3,890,134.43	$3,051,738.53
19. Freight earnings per mile of road	$28,969.85	$26,196.15	$23,334.05	$13,554.55	$19,066.48	$14,957.30
20. Freight earnings per train-mile	$4.23169	$4.04185	$4.16 170	$3.94656	$3.93015	$3.65379
Total traffic:						
21. Gross earnings from operation	$6,399,323.16	$5,708,039.39	$5,123,951.28	$3,560,613.29	$4,273,064.88	$3,414,220.78
22. Gross earnings from operation per mile of road	$31,808.94	$28,309.47	$25,113.71	$15,450.03	$20,943.32	$16,733.92
23. Gross earnings from operation per train-mile	$3.52319	$3.43976	$3.41929	$3.08187	$3.17909	$2.86398
24. Operating expenses	$3,341,622.80	$2,812,493.44	$2,438,376.88	$2,047,622.89	$2,479,976.56	$1,745,857.17
25. Operating expenses per mile of road	$16,610.11	$13,948.78	$11,951.07	$8,884.94	$12,154.95	$8,556.87
26. Operating expenses per train-mile	$1.83975	$1.69486	$1.62717	$1.77231	$1.84506	$1.46449
27. Income from operation	$3,057,700.36	$2,895,545.95	$2,685,574.40	$1,512,990.40	$1,793,088.32	$1,668,363.61
28. Income from operation per mile of road	$15,198.83	$14,360.69	$13,162.64	$6,565.09	$8,788.36	$8,177.05
Car mileage, etc.:						
30. Average number of passenger cars per train-mile	3.32	3.24	3.17	3.03	2.87	....
31. Average number of passengers per train-mile	35	37	33	32	31	....
36. Average number of freight cars per train-mile	37.45	37.99	39.01	37.06	39.04	37.29
37. Average number of loaded cars per train-mile	25.65	25.34	25.12	23.77	22.94	22.91
38. Average number of empty cars per train-mile	11.80	12.66	13.90	13.29	16.10	14.38
39. Average number of tons of freight per train-mile	964.51	938.77	96.180	886.08	917.70	918.14
40. Average number of tons of freight per loaded car-mile	37.60	37.05	38.29	37.27	40.00	40.07
41. Average mileage operated during year	201.18	201.63	204.03	230.46	204.03	204.03

Statement showing freight-traffic movement (company's material excluded) compiled from annual reports of the Bessemer & Lake Erie R. R. Co., to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF AGRICULTURE.										
Grain:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Freight originating on this road	1,865	9,507	9,423	15,167	2,768	3,223	2,550	2,308	1,575	2,084
Freight received from connecting roads and other carriers	14,285	6,350	4,995	7,787	16,171	14,746	18,250	9,913	11,422	9,322
Total freight tonnage	16,150	15,857	14,418	22,954	18,939	17,969	20,800	12,221	12,997	11,406
Flour:										
Freight originating on this road	768	3,145	1,873	1,748	1,988	2,353	2,761	2,119	2,699	2,041
Freight received from connecting roads and other carriers	2,879	1,493	1,076	1,165	2,434	2,528	1,640	1,628	1,592	1,959
Total freight tonnage	3,647	4,638	2,949	2,913	4,422	4,881	4,401	3,747	4,291	4,000
Other mill products:										
Freight originating on this road	406	4,859	5,515	3,485	1,208	1,323	1,921	1,214	1,240	689
Freight received from connecting roads and other carriers	6,284	2,385	2,919	4,331	6,146	4,243	3,928	5,599	5,029	3,737
Total freight tonnage	6,690	7,244	8,434	7,816	7,354	5,566	5,849	6,813	6,269	4,426
Hay:										
Freight originating on this road	5,404	9,156	6,250	5,807	9,362	5,686	5,285	6,087	7,465	5,753
Freight received from connecting roads and other carriers	376	309	217	41	28	68	59	111	33	84
Total freight tonnage	5,780	9,465	6,467	5,848	9,390	5,754	5,344	6,198	7,498	5,837
Tobacco:										
Freight originating on this road					82	50	44	24	5	
Freight received from connecting roads and other carriers					4	66	73	19	25	128
Total freight tonnage					86	116	117	43	30	128
Cotton:										
Freight originating on this road				10					2,294	
Freight received from connecting roads and other carriers			15						596	
Total freight tonnage			15	10					2,890	

Statement showing freight-traffic movement (company's material excluded) compiled from annual reports of the Bessemer & Lake Erie R. R. Co., to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PROUCTS OF AGRICULTURE—continued.										
Fruit and vegetables:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Freight originating on this road	1,895	1,901	3,089	1,773	7,091	2,933	2,967	1,759		3,649
Freight received from connecting roads and other carriers	1,387	432	580	393	226	294	366	544		701
Total freight tonnage	3,282	2,333	3,669	2,166	7,317	3,227	3,333	2,303		4,350
Other products of agriculture:										
Freight originating on this road	51	344	862	866						
Freight received from connecting roads and other carriers	870	155	894	1,029						
Total freight tonnage	921	499	1,756	1,895						
Total:										
Freight originating on this road	10,389	28,912	27,012	28,856	22,499					
Freight received from connecting roads and other carriers	26,081	11,124	10,696	14,746	25,009					
Total freight tonnage	36,470	40,036	37,708	43,602	47,508					
PRODUCTS OF ANIMALS.										
Live stock:										
Freight originating on this road	2,036	2,297	2,159	2,797	2,996	2,405	2,508	2,385	2,686	3,073
Freight received from connecting roads and other carriers	888	375	245	292	302	253	261	362	395	277
Total freight tonnage	2,924	2,6 72	2,404	3,089	3,298	2,658	2,769	2,747	3,081	3,35
Dressed meats:										
Freight originating on this road	2		16	27	58	116	73	118	81	105
Freight received from connecting roads and other carriers	17			2	632	25	65	26	16	73
Total freight tonnage	19		16	29	690	141	138	144	97	178
Other packing-house products:										
Freight originating on this road	2			5	366	483	541	471	543	141
Freight received from connecting roads and other carriers	61	3			1,357	1,345	846	816	384	104
Total freight tonnage	63	3		5	1,723	1,828	1,387	1,287	927	245

Poultry, game, and fish:										
Freight originating on this road	5	35	53	64	41	43	36	46	26	42
Freight received from connecting roads and other carriers	18	....	1	7	7	17	31	....	....	47
Total freight tonnage	23	35	54	71	48	60	67	46	26	89
Wool:										
Freight originating on this road	25	59	88	79	111	37	66	121	156	145
Freight received from connecting roads and other carriers	38	74	63	14	23	....	....	16	8	9
Total freight tonnage	63	133	151	93	134	37	66	137	164	154
Hides and leather:										
Freight originating on this road	103	65	242	419	355	435	533	283	222	326
Freight received from connecting roads and other carriers	87	4	20	9	140	664	196	193	281	162
Total freight tonnage	190	69	262	428	495	1,099	729	476	503	488
Other products of animals:										
Freight originating on this road	100	180	518	567	....	....	....	....	....	....
Freight received from connecting roads and other carriers	863	24	31	21	....	....	....	....	....	....
Total freight tonnage	963	204	549	588	....	....	....	....	....	....
Total:										
Freight originating on this road	2,273	2,636	3,076	3,958	3,927	....	....	....	....	....
Freight received from connecting roads and other carriers	1,972	480	360	345	2,461	....	....	....	....	....
Total freight tonnage	4,245	3,116	3,436	4,303	6,388	....	....	....	....	....
PRODUCTS OF MINES.										
Anthracite coal:										
Freight originating on this road	1,638	5,669	3,244	3,271	466	50	20	57	152	....
Freight received from connecting roads and other carriers	5,994	1,027	667	234	4,043	2,759	2,980	3,348	2,363	3,616
Total freight tonnage	7,632	6,696	3,911	3,505	4,509	2,809	3,000	3,405	2,515	3,616
Bituminous coal:										
Freight originating on this road	2,177,272	2,079,267	1,605,269	2,487,489	2,061,803	1,773,400	1,134,915	917,889	675,799	537,071
Freight received from connecting roads and other carriers	1,202,556	1,124,257	481,753	69,467	899,527	814,377	545,958	537,603	401,330	494,184
Total freight tonnage	3,379,828	3,203,524	2,087,022	2,556,956	2,961,330	2,587,777	1,680,873	1,455,492	1,077,129	1,031,255

Statement showing freight-traffic movement (company's material excluded) compiled from annual reports of the Bessemer & Lake Erie R. R. Co., to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF MINES—continued.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Coke:										
Freight originating on this road		10,910	13,652	13,133	2,672	330	90	28	148	18
Freight received from connecting roads and other carriers	6,890			34	11,445	8,776	5,541	4,171	3,728	5,419
Total freight tonnage	6,890	10,910	13,652	13,167	14,117	9,106	5,631	4,199	3,876	5,437
Ores:										
Freight originating on this road			6,565,289	5,220,921		5,834,557				
Freight received from connecting roads and other carriers	7,074.765	8,016,024	63	1,447	6,283,210	23,197	5,745,176	3,390,957	5,031,625	4,083,978
Total freight tonnage	7,074,765	8,016,024	6,565,352	5,222,368	6,283,210	5,857,754	5,745,176	3,390,957	5,031,625	4,083,978
Stone, sand, and other like articles:										
Freight originating on this road	654,992	710,029	510,041	435,354	297,442	246,055	224,227	213,037	182,605	151,457
Freight received from connecting roads and other carriers	414,766	262,906	154,155	37,222	16,703	16,725	12,932	9,643	8,078	6,462
Total freight tonnage	1,069,758	972,935	664,196	472,576	314,145	262,780	237,159	222,680	190,683	157,919
Other products of mines:										
Freight originating on this road	2,970	810	2,143	5,797						
Freight received from connecting roads and other carriers	12,166	3,908	2,614	1,452			36,209			
Total freight tonnage	15,136	4,718	4,757	7,249			36,209			
Total:										
Freight originating on this road	2,836,872	2,806,685	8,699,638	8,165,965	2,362,383					
Freight received from connecting roads and other carriers	8,717,137	9,408,122	639,252	109,856	7,214,928					
Total freight tonnage	11,554,009	12,214,807	9,338,890	8,275,821	9,577,311					
PRODUCTS OF FORESTS.										
Lumber:										
Freight originating on this road	6,491	26,825	18,356	20,373	53,438	43,412	31,343	20,820	23,297	18,177
Freight received from connecting roads and other carriers	21,723	9,916	6,348	8,967	36,632	36,396	34,211	28,026	33,255	20,063
Total freight tonnage	**28,214**	**36,741**	**24,704**	**29,340**	**90,070**	**79,808**	**65,554**	**48,846**	**56,552**	**38,240**

Other products of forest:										
Freight originating on this road	32,458	40,227	26,586	37,268	3,883	[1] 4,866	[1] 2,165	[1] 1,277	....	[1] 498
Freight received from connecting roads and other carriers	11,374	9,597	3,087	2,445	901	[1] 1,496	[1] 318	[1] 141	....	[1] 1,953
Total freight tonnage	43,832	49,824	29,673	39,713	4,784	[1] 6,362	[1] 2,483	[1] 1,418	....	[1] 2,451
Total:										
Freight originating on this road	38,949	67,052	44,942	57,641	57,321	....	....	....	....	....
Freight received from connecting roads and other carriers	33,097	19,513	9,435	11,412	37,533	....	....	....	....	....
Total freight tonnage	72,046	86,565	54,377	69,053	94,854	....	....	....	....	....
MANUFACTURES.										
Petroleum and other oils:										
Freight originating on this road	240	3,334	2,588	3,026	808	397	198	302	809	850
Freight received from connecting roads and other carriers	6,345	1,771	1,327	1,358	2,241	1,715	1,676	2,136	2,465	1,884
Total freight tonnage	6,585	5,105	3,915	4,384	3,049	2,112	1,874	2,438	3,274	2,734
Sugar:										
Freight originating on this road	19	14,650	3,252	390	4,394	2,674	139	58	30	....
Freight received from connecting roads and other carriers	14,069	1,102	1,454	1,935	1,789	2,728	2,029	2,561	947	601
Total freight tonnage	14,088	15,752	4,706	2,325	6,183	5,402	2,168	2,619	977	601
Iron, pig and bloom:										
Freight originating on this road	3,225	53,724	313,359	56,381	1,416	....	....	30	69	4,721
Freight received from connecting roads and other carriers	201,246	16,950	11,165	10,160	32,869	....	35,170	28,228	19,305	122,231
Total freight tonnage	204,471	70,674	324,524	66,541	34,285	....	35,170	28,258	19,374	126,952
Iron and steel rails:										
Freight originating on this road	73	156,611	59,492	68,138	4,533	682	178	258	113	....
Freight received from connecting roads and other carriers	110,389	2,399	126	373	161,124	209,281	252,362	205,560	232,612	171,077
Total freight tonnage	110,462	159,010	59,618	68,511	165,657	209,963	252,540	205,818	232,725	171,077
Other castings and machinery:										
Freight originating on this road	20,354	40,308	7,237	15,302	21,196	19,538	13,057	10,906	37,786	37,420
Freight received from connecting roads and other carriers	14,697	6,390	1,219	8,272	61,160	51,068	31,322	37,012	316,628	190,774
Total freight tonnage	35,051	46,698	8,456	23,574	82,356	70,606	44,379	47,918	354,414	228,194

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[1] Represents staves, headings, etc.

Statement showing freight traffic movement (company's material excluded), compiled from annual reports of the ***Bessemer & Lake Erie*** *R. R. Co. to the Interstate Commerce Commission, for the years ending June 30, 1911 to 1902*—Continued.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
MANUFACTURES—continued.										
Bar and sheet metal:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Freight originating on this road	15,370	457,843	....	....	1,006	1,431	83	6,051	7,574	14
Freight received from connecting roads and other carriers	569,247	35,009	....	....	277,576	268,006	276,611	95,056	43,240	4,418
Total freight tonnage	584,617	492,852	....	....	278,582	269,437	276,694	101,107	50,814	4,432
Cement, brick, and lime:										
Freight originating on this road	58,793	185,220	92,454	51,188	17,285	8,828	11,516	12,115	9,355	11,470
Freight received from connecting roads and other carriers	234,732	52,924	23,319	32,073	89,901	66,474	24,789	18,542	49,182	15,428
Total freight tonnage	293,525	238,144	115,773	83,261	107,186	75,302	36,305	30,657	58,537	26,898
Agricultural implements:										
Freight originating on this road	36	261	113	260	832	922	254	479	529	260
Freight received from connecting roads and other carriers	537	122	17	55	641	578	588	1,404	829	861
Total freight tonnage	573	383	130	315	1,473	1,500	842	1,883	1,358	1,121
Wagons, carriages, tools, etc.:										
Freight originating on this road	1,067	948	1,074	672	986	1,168	1,392	1,291	1,530	1,233
Freight received from connecting roads and other carriers	288	91	15	32	317	352	266	254	370	605
Total freight tonnage	1,355	1,039	1,089	704	1,303	1,520	1,658	1,545	1,900	1,838
Wines, liquors, and beers:										
Freight originating on this road	2,107	3,108	2,176	3,025	1,949	1,702	1,925	2,204	924	1,078
Freight received from connecting roads and other carriers	207	109	161	333	174	254	74	74	85	324
Total freight tonnage	2,314	3,217	2,337	3,358	2,123	1,956	1,999	2,278	1,009	1,402
Household goods and furniture:										
Freight originating on this road	1,173	2,730	1,650	1,705	1,870	1,990	1,663	1,455	1,477	1,553
Freight received from connecting roads and other carriers	2,149	382	272	257	661	646	554	455	601	652
Total freight tonnage	**3,322**	**3,112**	**1,922**	**1,962**	**2,531**	**2,636**	**2,217**	**1,910**	**2,078**	**2,205**

Other manufactures:										
Freight originating on this road	15,593	301,638	652,190	676,934	93,236	[1] 41,351	[2] 2,273	[3] 18,432	[2] 1,499	[4] 70
Freight received from connecting roads and other carriers	133,678	42,701	27,618	30,920	365,160	[1] 226,772	....	[3] 125,249	[2] 68	[4] 15,640
Total freight tonnage	149,271	344,339	679,808	707,854	458,396	[1] 268,123	[2] 2,273	[3] 143,681	[2] 1,567	[4] 15,710
Total:										
Freight originating on this road	118,050	1,220,375	1,135,585	877,021	149,511	....	....	....	....	....
Freight received from connecting roads and other carriers	1,287,584	159,950	66,693	85,768	993,613	....	....	....	....	....
Total freight tonnage	1,405,634	1,380,325	1,202,278	962,789	1,143,124	....	....	....	....	....
Merchandise:										
Freight originating on this road	6,930	7,540	9,099	8,120	15,386	15,425	7,113	8,799	7,192	6,077
Freight received from connecting roads and other carriers	6,518	3,397	5,224	5,880	30,949	26,911	24,156	23,669	18,827	12,875
Total freight tonnage	13,448	10,937	14,323	14,000	46,335	42,336	31,269	32,468	26,019	18,952
Miscellaneous: Other commodities not mentioned above:										
Freight originating on this road	83,363	147,216	99,388	101,668	57,623	38,698	50,719	[5] 15,975	13,789	17,016
Freight received from connecting roads and other carriers	105,814	62,974	66,737	38,835	29,447	194,749	253,038	[5] 37,241	19,131	15,742
Total freight tonnage	189,177	210,190	166,125	140,503	87,070	233,447	303,757	[5] 53,216	32,920	32,758
Total tonnage:										
Freight originating on this road	3,096,826	4,280,416	10,018,740	9,243,229	2,668,650	8,056,563	1,502,555	1,248,398	983,669	807,031
Freight received from connecting roads and other carriers	10,178,203	9,665,560	798,397	266,842	8,333,940	1,977,509	7,311,675	4,570,557	6,204,450	5,185,390
Total freight tonnage	13,275,029	13,945,976	10,817,137	9,510,071	11,002,590	10,034,072	8,814,230	5,818,955	7,188,119	5,992,421

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[1] Represents other iron and steel.
[2] Represents alum.
[3] Represents alum, and other iron and steel.
[4] Represents cinders, slag, etc.
[5] Includes salt, cinders, slag, etc.

The Chairman. Do you know what the operating cost of transporting ore is?

Mr. Freer. I have, for instance, the Bessemer & Lake Erie report here.

The Chairman. Please explain what that report is.

Mr. Freer. This report to which you were just referring is one furnished by the Interstate Commerce Commission. Now, I have here the Bessemer & Lake Erie general manager's report for the year ending December 31, 1910.

The Chairman. Note the page there, so that the stenographer can get it.

Mr. Freer. Page 4. It shows the average cost of handling each ton of freight during the year 1910 over the Bessemer & Lake Erie was 30.94 cents per ton.

The Chairman. How was that? I did not catch that.

Mr. Freer. I say the average cost per ton was 30.94 cents.

The Chairman. That is for all freight?

Mr. Freer. That is for all freight.

The Chairman. Now, would the cost of transporting ore be greater or less than that total cost? How does the ore in cost of transportation compare with the total cost?

Mr. Freer. The cost of transporting ore should be less than the cost of transporting all the freight.

The Chairman. Why?

Mr. Freer. It moves in much heavier trains. This is based on an average train tonnage, for instance, of 1,000 tons, while their ore moves in trains of at least 2,000 tons, and with heavy freight of the character of ore moving in the quantities that it does, and in the heavy train loads that it does, it should cost less than the average of all their traffic. This average includes high-class freight and everything else.

The Chairman. The cost of transporting ore, then, would be considerably less than the cost of transporting freight generally?

Mr. Freer. Yes, sir.

The Chairman. Do you know what the net earnings of this railroad amounted to for the year 1910? Is it given there?

Mr. Freer. I gave you that, I think, $3,728,357.

The Chairman. Do you understand that the Bessemer & Lake Erie Railroad is operated indirectly by and in the interests of the United States Steel Corporation and as its subsidiary?

Mr. Freer. I understand that; yes, sir.

The Chairman. I will ask you to look at the division sheets which I will hand you, and ask you how a shipment of rails or other steel parts originating in the mills of the Steel Corporation at Pittsburgh, and destined to points in the Carolinas, would be routed.

Mr. Reed. Are you asking, Mr. Chairman, what the traffic agent of the steel company would do?

The Chairman. I am asking him to state by the division sheets how the rails could be routed.

Mr. Reed. How they could be routed?

The Chairman. What provision is made for their routing by these division sheets?

Mr. FREER. There is nothing here that would indicate that; that is, these papers you have just handed me do not show the routing on business from Pittsburgh to the Carolinas.

The CHAIRMAN. No, just pass that for the present. I will ask you from your knowledge of railroads, if you have any information as to how this rate of 96 cents on ore from Conneaut to the Pittsburgh district is made, or ore rates generally?

Mr. FREER. How it is made?

The CHAIRMAN. Yes how is this rate made? Explain that fully to the committee.

Mr. FREER. It is made by conference between the railroads leading from the various ports. This rate has been in effect for a number of years, but when it was established it was necessary for the different railroads to have a conference to discuss the matter, because the rates must necessariy be uniform by the different roads into the same district.

The CHAIRMAN. What roads would send representatives to this conference to fix this ore rate?

Mr. FREER. What roads would send them?

The CHAIRMAN. Yes.

Mr. FREER. All roads interested in the traffic—the roads from the different Lake ports.

Mr. REED. It has already been testified by the freight agent of the Bessemer & Lake Erie Railroad that that road did not participate in such a conference, but simply followed the rate that was fixed by the other carriers. I want to know if the chairman will ask the question whether Mr. Freer means that he knows that they absolutely participated in the conference, or whether he infers that they probably would.

The CHAIRMAN. I did not ask him whether the Bessemer & Lake Erie did. I asked him how these rates were fixed generally.

Mr. REED. Oh.

Mr. YOUNG. It might be well to bring that out.

The CHAIRMAN. Do you know whether any representative of the Bessemer & Lake Erie participated in this conference or not?

Mr. FREER. I do not, sir.

The CHAIRMAN. What have you to say with respect to the rates on ore from Conneaut to Pittsburgh, as compared with the rates on ore from Pittsburgh to Youngstown, Ohio, and West Virginia points?

Mr. REED. Do you mean from the Lakes to Youngstown?

The CHAIRMAN. Yes.

Mr. FREER. From the Lakes to Youngstown?

The CHAIRMAN. Yes.

Mr. FREER. Well, I stated those rates sometime ago. The rate to the Youngstown district is 56 cents, as compared with the 96-cent rate to Pittsburgh; 60 cents into the Wheeling district, as compared with the 96-cent rate, practically the same haul to Pittsburgh; 50 cents to Columbus, for 122-mile haul, as compared with the 96-cent rate to Pittsburgh, for a 140-mile haul; 90-cent rate to the southern Ohio and Ashland-Ironton district, for about a 260-mile haul, as compared with 96 cents into Pittsburg for about half that haul.

The CHAIRMAN. I will ask you to state some of the more important lines operated by the United States Steel Corporation.

Mr. FREER. Operated by them?

The CHAIRMAN. Yes; owned, operated, or controlled—their subsidiaries.

Mr. FREER. The two Duluth roads we spoke of this morning, this Bessemer & Lake Erie, the line we have just mentioned, the Birmingham Southern, the Union Railroad, the Newburgh & South Shore, Lake Terminal, and the Elgin, Joliet & Eastern. Those are the more important lines that I can recall.

The CHAIRMAN. I hand you a statement covering the Elgin, Joliet & Eastern. What is the mileage of that road and the general character of its business?

Mr. FREER. It has main-line mileage of 130 miles. It has a total mileage of 840 miles.

Mr. YOUNG. Eight hundred?

Mr. FREER. Eight hundred and forty miles, total mileage. The main line is 130 miles.

Mr. YOUNG. What does that mileage not main line mileage consist of?

Mr. FREER. That consists of additional tracks, sidings, and spurs. It has a belt extending around Chicago. That is about 130 miles from, say, Gary on the eastern end to Waukegan on the northwestern end. That would be the 130 miles which is shown as main-line mileage. The balance is spurs and yard tracks and additional main tracks.

The CHAIRMAN. Are the track facilities of these railroads at Gary, Joliet, and Waukegan?

Mr. FREER. Well, there would be those yards, yes; the industrial tracks at Gary, South Chicago, Joliet, Waukegan, and other places.

The CHAIRMAN. What is the principal source of revenue of this road?

Mr. FREER. The revenue is entirely derived from freight—that is, practically entirely. The passenger business is so small it is not noticeable. The passenger service revenue in 1910 was $990.

The CHAIRMAN. What was the freight revenue?

Mr. FREER. The freight revenue was eight million six hundred some odd thousand dollars.

The CHAIRMAN. Does this road operate any other roads, or lease them or control them, in any way?

Mr. FREER. Yes, sir; it leases the Chicago, Lake Shore & Eastern.

The statement referred to is as follows:

Statement compiled from annual reports of Elgin, Joliet & Eastern Railway Co.[1] *to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.*[2]

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$10,000,000	$10,000,000	$10,000,000	$6,000,000
Funded debt outstanding at end of year	$10,000,000	$10,000,000	$10,000,000	$8,500,000
Single-track mileage owned at end of year—main line	129.94	129.94	129.94	129.94
Single-track mileage owned at end of year—branches and spurs	97.71	99.39	101.61	101.77
Total single-track mileage operated at end of year	841.79	808.25	770.33	238.56
Total operating revenues	$8,053,689.90	$9,352,325.38	$2,954,969.27	$2,389,861.76
Total operating expenses	$5,287,634.29	$5,938,394.58	$1,826,451.34	$1,508,749.87
Total net revenue	$2,766,055.61	$3,413,930.80	$1,128,517.93	$881,111.89
Net corporate income	$486,241.91	$422,856.33	$601,082.71	$467,446.13
Dividends declared from income	$400,000.00	$400,000.00	[3] $240,000.00	$240,000.00
Other disbursements from net corporate income			$32,439.33	$40,290.33
Balance for year carried forward to credit of profit and loss	$86,241.91	$22,856.33	$328,643.38	$187,155.80
Rate per cent of dividend	4	4		4
Traffic and mileage statistics:				
Passenger traffic—				
1. Number of passengers carried earning revenue	371	343	1,062	1,278
2. Number of passengers carried 1 mile	8,756	7,532	24,351	29,235
3. Number of passengers carried 1 mile per mile of road	11	10	86	123
4. Average distance carried (miles)	23.60	21.96	22.93	22.87
5. Total passenger revenue	$89.11	$164.31	$487.52	$587.09
6. Average amount received from each passenger (cents)	24.019	47.904	45.906	45.938
7. Average receipts per passenger per mile (cents)	1.018	2.181	2.002	2.008
8. Total passenger service train revenue	$303.07	$990.31	$2,509.90	$2,946.28
9. Passenger service train revenue per mile of road	$0.36	$1.27	$8.88	$12.35
10. Passenger service train revenue per train-mile (cents)		9.978	8.858	10.457
Freight traffic—				
11. Number of tons carried of freight-earning revenue	18,376,392	21,671,111	7,733,031	6,234,846
12. Number of tons carried 1 mile	1,139,532,221	1,109,098,434	463,199,481	387,675,246
13. Number of tons carried 1 mile per mile of road	1,370,322	1,420,410	1,638,310	1,625,064
14. Average distance haul of 1 ton (miles)	62.01	51.18	59.90	62.18
15. Total freight revenue	$7,608,861.11	$8,617,577.48	$2,845,179.38	$2,305,663.74
16. Average amount received for each ton of freight (cents)	41.406	39.765	36.793	36.980
17. Average receipts per ton per mile (cents)	.668	.776	.614	.595
18. Freight revenue per mile of road	$9,149.88	$11,036.43	$10,063.24	$9,664.92
19. Freight revenue per train-mile	$4.63274	$5.44944	$3.45004	$3,06653

[1] The annual reports of this company for the year 1908 and for subsequent years indicate that it was controlled by the United States Steel Corporation; this information was not given or called for in reports for prior years. The annual reports do not indicate that the Elgin, Joliet & Eastern Railway Co. controlled any other transportation companies or operated such companies, except for the years 1911, 1910, and 1909, which indicate that it operated the following transportation companies: Chicago, Lake Shore & Eastern Railway, Chicago & South Eastern Railway, Chicago & Kenosha Railway, Joliet & Blue Island Railway, and Milwaukee, Bay View & Chicago Railroad.

[2] For some items the figures shown for 1908 and for subsequent years are not fully comparable with those shown for 1907 and for prior years, because of changes in classifications and report forms.

[3] Represents 4 per cent on $6,000,000.

Statement compiled from annual reports of Elgin, Joliet & Eastern Railway Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1911	1910	1909	1908
Traffic and mileage stations—Continued.				
Total traffic—				
20. Operating revenues	$8,053,689.90	$9,352,325.38	$2,954,969.27	$2,389,861.76
21. Operating revenues per mile of road	$9,684.80	$11,977.42	$10,451.56	$10,017.86
22. Operating revenues per train-mile	$4.90073	$5.91208	$3.58251	$3.17595
23. Operating expenses	$5,287,634.29	$5,938,394.58	$1,826,451.34	$1,508,749.87
24. Operating expenses per mile of road	$6,358.54	$7,605.23	$6,460.05	$6,324.40
25. Operating expenses per train-mile	$3.21757	$3.75397	$2.21433	$2.00502
26. Net operating revenue	$2,766,055.61	$3,413,930.80	$1,128,517.93	$881,111.89
27. Net operating revenue per mile of road	$3,326.26	$4,37219	$3,991.51	$3,693.46
28. Average number of passengers per car-mile		1	1	1
29. Average number of passengers per train-mile		1	1	1
30. Average number of passenger cars per train-mile		1.00	1.41	1.41
31. Average number of tons of freight per loaded car-mile	34.38	34.63	28.83	27.16
32. Average number of tons of freight per train-mile	693.82	701.35	561.67	515.61
33. Average number of freight cars per train-mile	32.34	32.67	29.85	29.51
34. Average number of loaded cars per train-mile	20.18	20.25	19.49	18.98
35. Average number of empty cars per train-mile	11.16	11.48	9.48	9.63
36. Average mileage operated during year	831.58	780.83	282.73	238.56

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000
Funded debt outstanding at end of year	$8,500,000	$8,500,000	$8,500,000	$8,500,000	$8,500,000	$8,352,000
Single-track mileage owned at end of year—main line	129.94	129.94	129.94	129.94	129.94	129.94
Single-track mileage owned at end of year—branches and spurs	99.25	98.39	98.27	88.83	86.40	84.60
Total single-track mileage operated at end of year	236.04	235.18	235.06	225.62	223.19	221.39
Total gross earnings from operation	$2,711,673.55	$2,629,411.49	$2,230,114.87	$2,201,892.93	$2,189,633.35	$2,173,899.78
Total operating expenses	$1,663,832.84	$1,485,706.90	$1,283,222.46	$1,367,601.32	$1,431,050.68	$1,303,050.08
Income from operation	$1,047,840.71	$1,143,704.59	$946,892.41	$834,291.61	$758,582.67	$870,849.70
Net income	$411,220.40	$493,476.09	$366,017.34	$279,472.18	$274,801.51	$410,480.75
Dividends	$240,000.00	$240,000.00	$240,000.00	$240,000.00	$240,000.00	$240,000.00
Rate per cent of dividend	4	4	4	4	4	4
Surplus from operations of year	$171,220.40	$253,476.09	$126,017.34	$39,472.18	$34,801.51	$170,480.75
Traffic and mileage statistics:						
Passenger traffic—						
1. Number of passengers carried earning revenue	1,036	385	11,963	28,134	34,349	36,017
2. Number of passengers carried 1 mile	23,757	8,873	196,432	466,489	579,463	640,732
3. Number of passengers carried 1 mile per mile of road	101	38	836	2,068	2,596	2,894
4. Average distance carried (miles)	22.93	23.05	16.42	16.58	16.87	17.79
5. Total passenger revenue	$685.29	$266.59	$6,093.46	$14,458.74	$17,892.46	$19,033.21

6. Average amount received from each passenger (cents)	66.148	69.244	50.936	51.391	52.090	52.845
7. Average receipts per passenger per mile (cents)	2.885	3.005	3.102	3.099	3.088	2.970
8. Total passenger earnings	$1,885.29	$1,841.08	$7,931.72	$16,928.51	$20,314.55	$21,423.25
9. Passenger earnings per mile of road	$7.99	$7.83	$33.74	$75.03	$91.02	$96.77
10. Passenger earnings per train-mile (cents)	6.062	5.884	25.341	54.085	62.847	59.180
Freight traffic—						
11. Number of tons carried of freight earning revenue	6,684,093	6,901,036	5,315,514	5,355,001	5,531,943	5,690,343
12. Number of tons carried 1 mile	431,764,703	425,005,102	336,466,607	358,623,300	366,669,174	351,277,991
13. Number of tons carried 1 mile per mile of road	1,829,201	1,807,148	1,431,407	1,589,501	1,642,857	1,586,693
14. Average distance haul of 1 ton (miles)	64.60	61.58	63.30	66.97	66.28	61.73
15. Total freight revenue	$2,357,365.11	$2,363,717.32	$2,037,983.07	$2,075,469.47	$2,041,033.88	$2,029,367.12
16. Average amount received for each ton of freight (cents)	35.268	34.252	38.340	38.757	36.895	35.663
17. Average receipts per ton per mile (cents)	.546	.556	.606	.579	.557	.577
18. Total freight earnings	$2,357,365.11	$2,363,717.32	$2,037,983.07	$2,075,469.47	$2,041,033.88	$2,029,367.12
19. Freight earnings per mile of road	$9,987.14	$10,050.67	$8,670.05	$9,198.96	$9,144.83	$9,166.48
20. Freight earnings per train-mile	$2.70572	$2.71255	$2.72282	$2.65212	$2.72042	$2.55145
Total traffic—						
21. Gross earnings from operation	$2,711,673.55	$2,629,411.49	$2,230,114.87	$2,201,892.93	$2,189,633.35	$2,173,899.78
22. Gross earnings from operation per mile of road	$11,488.19	$11,180.42	$9,48743	$9,75930	$9,81062	$9,819.32
23. Gross earnings from operation per train-mile	$3.11238	$3.01745	$2.97951	$2.81367	$2.91451	$2.73316
24. Operating expenses	$1,663,832.84	$1,485,706.90	$1,283,222.46	$1,367,601.32	$1,431,050.68	$1,303,050.08
25. Operating expenses per mile of road	$7,048.94	$6,317.32	$5,459.13	$6,061.53	$6,411.80	$5,885.76
26. Operating expenses per train-mile	$1.90970	$1.70496	$1.71443	$1.74757	$1.90480	$1.63828
27. Income from operation	$1,047,840.71	$1,143,70.459	$946,892.41	$834,291.61	$758,582.67	$870,849.70
28. Income from operation per mile of road	$4,439.25	$4,863.10	$4,028.30	$3,697.77	$3,398.82	$3,933.56
Car mileage, etc.—						
30. Average number of passenger cars per train-mile	1.10	.13	1.50	2.33	2.38	1.84
31. Average number of passengers per train-mile			6	15	18	18
36. Average number of freight cars per train-mile	28.44	27.92	29.51	29.78	33.99	31.47
37. Average number of loaded cars per train-mile	19.45	19.48	18.83	19.95	23.14	21.12
38. Average number of empty cars per train-mile	8.99	8.44	10.68	9.83	10.84	10.35
39. Average number of tons of freight per train-mile	495.56	487.73	449.53	458.26	488.72	441.64
40. Average number of tons of freight per loaded car-mile	25.48	25.04	23.88	22.97	21.12	20.91
41. Average mileage operated during year	236.04	235.18	235.06	225.62	223.19	221.39

Statement showing freight traffic movement (company's material excluded) compiled from annual reports of the Elgin, Joliet & Eastern Railway Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.

Items.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF AGRICULTURE.										
Grain:										
Freight originating on this road	*Tons.* 30,584	*Tons.* 32,816	*Tons.* 60,901	*Tons.* 38,401	*Tons.* 51,802	*Tons.* 55,747	*Tons.* 96,228	*Tons.* 59,498	*Tons.* 70,760	*Tons.* 66,592
Freight received from connecting roads and other carriers	135,258	145,673	135,576	125,696	38,177	66,207	44,313	275,616	345,679	516,848
Total freight tonnage	165,842	178,489	196,477	164,097	89,979	121,954	140,541	335,114	416,439	583,440
Flour:										
Freight originating on this road	....	25	....	70	5,347	7,147	9,171	559	52	....
Freight received from connecting roads and other carriers	318,643	287,277	281,716	256,815	12,423	17,891	2,747	3,610	3,818	4,007
Total freight tonnage	318,643	287,302	281,716	256,885	17,770	25,038	11,918	4,169	3,870	4,007
Other mill products:										
Freight originating on this road	7,863	649	2,594	7,834	17,024	8,058	10,878	2,806	2,151	12,664
Freight received from connecting roads and other carriers	147,975	56,088	70,133	84,550	2,279	1,840	1,700	2,759	3,769	8,526
Total freight tonnage	155,838	56,737	72,727	92,384	19,303	9,898	12,578	5,565	5,920	21,190
Hay:										
Freight originating on this road	3,465	1,010	1,970	1,056	977	962	740	1,298	1,272	282
Freight received from connecting roads and other carriers	7,899	4,313	2,473	7,858	2,512	132	1,972	165	466	974
Total freight tonnage	11,364	5,323	4,443	8,914	3,489	1,094	2,712	1,463	1,738	1,256
Tobacco:										
Freight received from connecting roads and other carriers	8,921	7,570	8,135	6,060	....	....	....	....	....	....
Cotton:										
Freight received from connecting roads and other carriers	....	10	....	120	....	....	....	....	....	....
Fruit and vegetables:										
Freight originating on this road	169	88	310	152	753	323	551	103	211	92
Freight received from connecting roads and other carriers	46,873	84,808	40,782	57,872	1,467	2,798	2,587	1,776	3,949	1,033
Total freight tonnage	47,042	84,896	41,092	58,024	2,220	3,121	3,138	1,879	4,160	1,125

Other products of agriculture:										
Freight received from connecting roads and other carriers	11,927	10,793	2,316	17,637	....	....	....	....	....	....
Total:										
Freight originating on this road	42,081	34,588	65,775	47,513	75,903	....	....	....	....	....
Freight received from connecting roads and other carriers	677,496	596,532	541,131	556,608	56,858	....	....	....	....	....
Total freight tonnage	719,577	631,120	606,906	604,121	132,761	....	....	....	....	....
PRODUCTS OF ANIMALS.										
Live stock:										
Freight originating on this road	1,565	2,829	3,223	2,466	3,084	3,565	3,157	3,435	3,204	3,459
Freight received from connecting roads and other carriers	6,471	5,226	4,008	8,589	1,250	2,099	1,326	1,224	1,386	625
Total freight tonnage	8,036	8,055	7,231	11,055	4,334	5,664	4,483	4,659	4,590	4,084
Dressed meats:										
Freight received from connecting roads and other carriers	47,884	42,195	52,331	18,183	....	....	....	....	....	....
Other packing-house products:										
Freight received from connecting roads and other carriers	3,985	2,258	2,721	12,014	....	....	....	....	....	....
Poultry, game, and fish:										
Freight received from connecting roads and other carriers	814	1,150	3,480	1,033	....	....	....	....	....	....
Wool:										
Freight received from connecting roads and other carriers	15,120	1,796	10,220	3,941	....	....	....	....	....	....
Hides and leather:										
Freight received from connecting roads and other carriers	21,552	16,561	16,567	11,200	....	....	....	....	....	....
Other products of animals:										
Freight received from connecting roads and other carriers	2,319	1,852	710	1,519	....	....	....	....	....	....
Total:										
Freight originating on this road	1,565	2,829	3,223	2,466	3,084	....	....	....	....	....
Freight received from connecting roads and other carriers	98,145	71,038	90,037	56,479	1,250	....	....	....	....	....
Total freight tonnage	99,710	73,867	93,260	58,945	4,334	....	....	....	....	....

Statement showing freight traffic movement (company's material excluded) compiled from annual reports of the Elgin, Joliet & Eastern Railway Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Items.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF MINES.										
Anthracite coal:										
Freight received from connecting roads and other carriers	*Tons.* 83,863	*Tons.* 99,899	*Tons.* 92,190	*Tons.* 82,218	*Tons.* 48,187	*Tons.* 118,998	*Tons.* 104,238	*Tons.* 111,847	*Tons.* 48,399	*Tons.* 94,262
Bituminous coal:										
Freight originating on this road	2,068,188	2,060,957	700,808	612,152	803,269	803,474	970,562	1,029,189	1,067,578	1,020,875
Freight received from connecting roads and other carriers	2,370,513	3,066,209	1,421,070	657,880	338,718	442,411	219,199	159,371	339,913	170,316
Total freight tonnage	4,438,701	5,127,166	2,121,878	1,270,032	1,141,987	1,245,885	1,189,761	1,188,560	1,407,491	1,191,191
Coke:										
Freight originating on this road	699,148	502,361	24,999	9,195						
Freight received from connecting roads and other carriers	1,052,807	2,459,950	347,412	618,106	791,294	633,363	542,169	395,702	390,122	407,574
Total freight tonnage	1,751,955	2,962,311	372,411	627,301	791,294	633,363	542,169	395,702	390,122	407,574
Ores:										
Freight received from connecting roads and other carriers	991,722	1,008,985	162,661	95,586	35,846	6,757	10,327	7,140	33,461	106,740
Stone, sand, and other like articles:										
Freight originating on this road	2,310,138	2,528,657	645,262	510,364	318,293	448,535	357,788	283,621	263,087	603,256
Freight received from connecting roads and other carriers	268,377	416,895	48,658	57,367	33,552	33,704	29,280	27,769	25,953	33,079
Total freight tonnage	2,578,515	2,945,552	693,920	567,731	351,845	482,239	387,068	311,390	289,040	636,335
Other products of mines:										
Freight originating on this road			30		38			[1] 120		
Freight received from connecting roads and other carriers	9,487	28,300	47,828	18,083	1,566	[1] 3,602	[1] 2,658	[1] 594	[1] 20,925	[1] 39,105
Total freight tonnage	9,487	28,300	47,858	18,083	1,604	[1] 3,602	[1] 2,658	[1] 714	[1] 20,925	[1] 39,105
Total:										
Freight originating on this road	5,077,474	5,091,975	1,371,099	1,131,711	1,121,600					
Freight received from connecting roads and other carriers	4,776,769	7,080,238	2,119,819	1,529,240	1,249,163					
Total freight tonnage	9,854,243	12,172,213	3,490,918	2,660,951	2,370,763					

PRODUCTS OF FORESTS.										
Lumber:										
Freight originating on this road	15,642	11,634	7,169	378	625	338	2,982	7,604	16,851	7,762
Freight received from connecting roads and other carriers	272,613	298,146	147,385	128,410	36,718	31,738	30,278	41,057	48,027	59,788
Total freight tonnage	288,255	309,780	154,554	128,788	37,343	32,076	33,260	48,661	64,878	67,550
Other products of forests:										
Freight originating on this road			113	411	193	[2] 304	[2] 246	[2] 307	[2] 488	[2] 127
Freight received from connecting roads and other carriers	2,240	12,079	31,498	48,043	2,856	[2] 6,378	[2] 4,607	[2] 7,061	[2] 7,285	[2] 11,217
Total freight tonnage	2,240	12,079	31,611	48,454	3,049	[2] 6,682	[2] 4,853	[2] 7,368	[2] 7,773	[2] 11,344
Total:										
Freight originating on this road	15,642	11,634	7,282	789	818					
Freight received from connecting roads and other carriers	274,853	310,225	178,883	176,453	39,574					
Total freight tonnage	290,495	321,859	186,165	177,242	40,392					
MANUFACTURES.										
Petroleum and other oils:										
Freight originating on this road	251,351	196,268	118,769	149,147	121,832	130,627	151,580	194,622	218,822	160.190
Freight received from connecting roads and other carriers	44,938	47,720	33,819	68,634	124,111	81,044	8,164	7,037	2,037	885
Total freight tonnage	296,289	243,988	152,588	217,781	245,943	211,671	159,744	201,659	220,859	161,075
Iron, pig and bloom:										
Freight originating on this road	146,319	246,842	27,842		157,738	238,988	323,246	273,273	353,816	356,427
Freight received from connecting roads and other carriers	65,430	141,369	92,009	365,251	286,221	399,324	185,402	209,278	226,663	164,096
Total freight tonnage	211,749	388,211	119,851	365,251	443,959	638,312	508,648	482,551	580,479	520,523
Iron and steel rails:										
Freight originating on this road	953,585	1,360,739	91,751	23,923	54,308	77,288	86.679	65,081	129,201	189,536
Freight received from connecting roads and other carriers	207,903	269,403	185,477	195,206	49,953	61,540	36,386	40,633	48,636	40,833
Total freight tonnage	1,161,488	1,630,142	277,228	219,129	104,261	138,828	123,065	105,714	177,837	230,369
Other castings and machinery:										
Freight originating on this road	25,253	49,326	35,427	50,480	20,873	172,973	95,298	40,035	12,323	13,864
Freight received from connecting roads and other carriers	219,616	160,474	163,671	103,992	26,342	179.725	75,359	44,648	13,735	8,631
Total freight tonnage	244,869	209,800	199,098	154,472	47,215	352,698	170,657	84,683	26,058	22,495

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[1] Represents salt.

[2] Represents hoops and staves.

Statement showing freight traffic movement (company's material excluded) compiled from annual reports of the Elgin, Joliet & Eastern Railway Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Items.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
MANUFACTURES—continued.										
Bar and sheet metal:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Freight originating on this road	623,174	569,180	76,420	47,607	70,489					
Freight received from connecting roads and other carriers	744,286	472,427	473,787	384,686	102,363					
Total freight tonnage	1,367,460	1,041,607	550,207	432,293	172,852					
Cement, brick, and lime:										
Freight originating on this road	848,862	968,138	152,034	77,262	31,923	12,734	10,483	19,158	21,109	3,745
Freight received from connecting roads and other carriers	316,379	391,897	272,283	174,931	22,744	35,357	23,948	38,525	31,103	20,536
Total freight tonnage	1,165,241	1,360,035	424,317	252,193	54,667	48,091	34,431	57,683	52,212	24,281
Agricultural implements:										
Freight received from connecting roads and other carriers	7,740	17,009	10,643	24,344						
Wagons, carriages, tools, etc.:										
Freight received from connecting roads and other carriers	7,885	4,907	15,825	13,227						
Wines, liquors, and beers:										
Freight originating on this road	224	30	29	240	67	277	57	100	101	39
Freight received from connecting roads and other carriers	158,566	75,990	61,051	52,962	5,146	4,552	4,112	4,011	3,371	3,093
Total freight tonnage	158,790	76,020	61,080	53,202	5,213	4,829	4,169	4,111	3,472	3,132
Household goods and furniture:										
Freight originating on this road	378	229	564	278	573	604	599	264	1,002	834
Freight received from connecting roads and other carriers	6,562	21,537	32,138	9,032	421	606	320	400	569	458
Total freight tonnage	6,940	21,766	32,702	9,310	994	1,210	919	664	1,571	1,292

Other manufactures:										
Freight originating on this road	[1] 825,506	[2] 1,018,436	[2] 578,575	[2] 502,065	[3] 380,287	[4] 279,371	[4] 280,150	[4] 261,114	[5] 232,767	[6] 214,064
Freight received from connecting roads and other carriers	[1] 154,298	[2] 254,327	[2] 289,265	[2] 180,401	[3] 16,534	[4] 10,773	[4] 8,399	[4] 17,358	[5] 36,959	[6] 32,874
Total freight tonnage	[1] 979,804	[2] 1,272,763	[2] 867,840	[2] 682,466	[3] 396,821	[4] 290,144	[4] 288,549	[4] 278,472	[5] 269,726	[6] 246,938
Total:										
Freight originating on this road	3,674,652	4,409,188	1,081,411	851,002	838,090	....	....	....	....	....
Freight received from connecting roads and other carriers	1,933,603	1,857,060	1,629,968	1,572,666	633,835	....	....	....	....	....
Total freight tonnage	5,608,255	6,266,248	2,711,379	2,423,668	1,471,925	....	....	....	....	....
Merchandise:										
Freight originating on this road	51,642	33,157	20,639	15,793	9,069	[4] 62,567	[4] 49,176	[4] 66,741	[4] 64,972	[4] 61,108
Freight received from connecting roads and other carriers	69,127	25,046	21,140	13,002	5,380	[4] 9,922	[4] 6,527	[4] 8,664	[4] 13,743	[4] 5,743
Total freight tonnage	120,769	58,203	41,779	28,795	14,449	[4] 72,489	[4] 55,703	[4] 75,405	[4] 78,715	[4] 66,851
Miscellaneous:—Other commodities not mentioned above:										
Freight originating on this road	1,010,699	1,630,410	291,291	115,052	267,168	173,670	147,102	78,081	57,761	50,873
Freight received from connecting roads and other carriers	672,644	517,191	311,333	166,072	2,382,301	2,272,723	1,372,823	1,561,747	1,364,447	1,193,311
Total freight tonnage	1,683,343	2,147,601	602,624	281,124	2,649,469	2,446,393	1,519,925	1,639,828	1,422,208	1,244,184
Total tonnage:										
Freight originating on this road	9,873,755	11,213,781	2,840,720	2,164,326	2,315,732	2,477,552	2,596,673	2,387,009	2,517,528	2,765,789
Freight received from connecting roads and other carriers	8,502,637	10,457,330	4,892,311	4,070,520	4,368,361	4,423,484	2,718,841	2,967,992	3,014,415	2,924,554
Total freight tonnage	18,376,392	21,671,111	7,733,031	6,234,846	6,684,093	6,901,036	5,315,514	5,355,001	5,531,943	5,690,343

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[1] Includes billets, wire, and wire rods.

[2] Includes ice, billets, wire, and wire rods.

[3] Includes ice.

[4] Represents wire and wire rods.

[5] Represents wire, wire rods, and scrap iron and steel.

[6] Represents glucose, wire, wire rods, and scrap iron and steel.

The CHAIRMAN. Please state the general character of the Chicago, Lake Shore & Eastern.

Mr. FREER. Of course, the Chicago, Lake Shore & Eastern is now merged in the E., J. & E. The Chicago, Lake Shore & Eastern was a short line running along the lake front from South Chicago, with a mileage of about 13 miles when it was operated independently, main line mileage. Then it was taken over and leased to the Elgin, Joliet & Eastern.

The CHAIRMAN. This road was formerly owned by the Illinois Steel Corporation, which is now a subsidiary of the United States Steel Corporation?

Mr. FREER. The Illinois Steel Co.; yes, sir.

The CHAIRMAN. That is, it was owned by the Illinois Steel Corporation, and subsequently by the Federal Steel Corporation, and now by the United States Steel Corporation.

Mr. FREER. I do not know the different changes, but it was controlled by the Illinois Steel Co., and is now controlled by the United States Steel Corporation.

The CHAIRMAN. How long has the Elgin, Joliet & Eastern operated the Chicago, Lake Shore & Eastern?

Mr. FREER. Since May, 1909, I think.

The CHAIRMAN. I hand you a copy of the report of the Chicago, Lake Shore & Eastern Railway Co.

Mr. FREER. The Chicago, Lake Shore & Eastern Railroad has been operated by the Elgin, Joliet & Eastern since June 1, 1909.

The statement referred to is as follows:

Statement compiled from annual reports of the Chicago, Lake Shore & Eastern Railway Co.[1] *to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.*[2]

Items.	1911	1910	1909 [3]	1908
Capital stock outstanding at end of year	$9,000,000	$9,000,000	$2,760,000	$2,760,000
Funded debt outstanding at end of year	$9,000,000	$9,000,000	$1,905,000	$2,065,000
Single-track mileage owned at end of year—main line	14.97	15.44	15.39	11.35
Single-track mileage owned at end of year—branches and spurs	259.17	226.41	191.32	243.36
Total single-track mileage operated at end of year			576.20	625.24
Total operating revenues			$3,891,227.43	$4,348,960.78
Total operating expenses			$2,426,973.25	$2,975,577.10
Total net revenue			$1,464,254.18	$1,373,383.68
Net corporate income	$795,001.57	$1,332,706.07	$346,892.74	$89,373.40
Other disbursements from net corporate income			$10,908.08	$36,127.22
Balance for year carried forward to credit of profit and loss	$795,001.57	$1,332,706.07	$335,984.66	$53,246.18
Dividends declared from surplus	$450,000.00	$900,000.00		
Rate per cent of dividend	5	10		
TRAFFIC AND MILEAGE STATISTICS.				
Freight traffic:				
11. Number of tons carried of freight earning revenue			9,908,683	10,683,766
12. Number of tons carried 1 mile [4]				
13. Number of tons carried 1 mile per mile of road [4]				
14. Average distance haul of 1 ton (miles) [4]				
15. Total freight revenue			$3,530,710.28	$3,915,439.78
16. Average amount received for each ton of freight (cents)			35.632	36.648
17. Average receipts per ton per mile (cents) [4]				
18. Freight revenue per mile of road			$6,127.58	$6,755.07
19. Freight revenue per train-mile			$6.93922	$6.10630
Total traffic:				
20. Operating revenues			$3,891,227.43	$4,348,960.78
21. Operating revenues per mile of road			$6,753.26	$7,502.99
22. Operating revenues per train-mile			$7.64300	$6.78240
23. Operating expenses			$2,426,973.25	$2,975,577.10
24. Operating expenses per mile of road			$4,212.03	$5,133.58
25. Operating expenses per train-mile			$4.76697	$4.64054
26. Net operating revenue			$1,464,254.18	$1,373,383.68
27. Net operating revenue per mile of road			$2,541.23	$2,369.41

[1] The annual reports of this company for the year 1908 and for subsequent years indicate that it was controlled by the United States Steel Corporation; this information was not given or called for in reports for prior years. The annual reports do not indicate that the Chicago, Lake Shore & Eastern Ry. Co. controlled any other transportation companies. The annual reports for the years 1909 to 1902 indicate that the Chicago, Lake Shore & Eastern Ry. Co. operated the Joliet & Blue Island Ry., the Chicago & Kenosha Ry., the Chicago & Southeastern Ry., and the Milwaukee, Bay View & Chicago Ry., under lease, which were included in this lease to the Elgin, Joliet & Eastern Ry. Co., effective June 1, 1909.

[2] For some items the figures shown for 1908 and for subsequent years are not fully comparable with those shown for 1907 and prior years, because of changes in classifications and report forms. Operating details not given for the years 1911 and 1910, for the reason that such details were not called for in the forms for reports to be filed by lessor companies.

[3] Report for 11 months ending May 31, 1909.

[4] This information not furnished.

Statement compiled from annual reports of the Chicago, Lake Shore & Eastern Railway Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1911	1910	1909	1908
TRAFFIC AND MILEAGE STATISTICS—continued.				
28. Average number of passengers per car-mile [1]				
29. Average number of passengers per train-mile [1]				
30. Average number of passenger cars per train-mile [1]				
31. Average number of tons of freight per loaded car-mile [2]				
32. Average number of tons of freight per train-mile [2]				
33. Average number of freight cars per train-mile			33.17	32.01
34. Average number of loaded cars per train-mile			18.42	17.13
35. Average number of empty cars per train-mile			13.75	13.88
36. Average mileage operated during year			576.20	579.63

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$2,760,000	$650,000	$650,000	$650,000	$650,000	$650,000
Funded debt outstanding at end of year	$2,225,000	$5,554,000	$4,620,000	$3,230,000	$3,230,000	$3,230,000
Single-track mileage owned at end of year—main line	11.35	11.35	11.35	97.24	82.56	77.68
Single-track mileage owned at end of year—branches and spurs	162.36	126.65	98.52			
Total single-track mileage operated at end of year	536.75	499.11	448.32	352.49	294.94	285.98
Total gross earnings from operation	$4,903,695.73	$4,311,336.90	$4,323,692.69	$3,126,691.56	$2,648,569.23	$2,635,206.05
Total operating expenses	$2,966,006.18	$2,384,835.40	$1,846,436.80	$1,690,497.66	$1,525,749.22	$1,374,080.28
Income from operation	$1,937,689.55	1,926,501.50	$2,477,255.89	$1,436,193.90	$1,122,820.01	$1,261,125.77
Net income	$363,651.59	$444,822.67	$1,498,543.38	$481,847.77	$31,106.98	$511,254.39
Dividends	$1,600,000.00		$2,400,000.00			
Rate per cent of dividend	[3] 58		[3] 369.23			
Surplus from operations of year	[4] $1,236,348.41	$444,822.67	[4] $901,456.62	$481,847.77	$31,106.98	$511,254.39
TRAFFIC AND MILEAGE STATISTICS.						
Passenger traffic.[1]						
Freight traffic:						
11. Number of tons carried of freight earning revenue	11,993,774	10,158,258	8,646,368	6,916,179	8,014,036	7,715,055
12. Number of tons carried 1 mile [2]						
13. Number of tons carried 1 mile per mile of road [2]						
14. Average distance haul of 1 ton (miles) [2]						
15. Total freight revenue	$4,271,959.75	$3,662,127.44	$3,861,784.70	$2,914,333.50	$2,372,965.80	$2,255,499.24
16. Average amount received for each ton of freight (cents)	35.618	36.050	44.664	42.138	29.610	29.235
17. Average receipts per ton per mile (cents) [2]						
18. Total freight earnings	$4,271,959.75	$3,662,127.44	$3,861,784.70	$2,914,333.50	$2,372,965.80	$2,255,499.24
19. Freight earnings per mile of road	$8,349.38	$7,728.62	$8,613.90	$8,267.85	$8,045.59	$7,886.91
20. Freight earnings per train-mile	$6.19403	$7.47855	$8.98821	$8.58586	$6.38432	$6.76529

Total traffic:						
21. Gross earnings from operation	$4,903,695.73	$4,311,336.90	$4,323,692.69	$3,126,691.56	$2,648,569.23	$2,635,206.05
22. Gross earnings from operation per mile of road	$9,584.08	$9,098.72	$9,644.21	$8,870.30	$8,980.02	$9,214.65
23. Gross earnings from operation per train-mile	$7.11000	$8.80432	$10.06329	$9.21149	$7.12582	$7.90420
24. Operating expenses	$2,966,006.18	$2,384,835.40	$1,846,436.80	$1,690,497.66	$1,525,749.22	$1,374,080.28
25. Operating expenses per mile of road	$5,796.94	$5,033.00	$4,118.57	$4,795.87	$5,173.08	$4,804.81
26. Operating expenses per train-mile	$4.30050	$4.87015	$4.29754	$4.98034	$4.10494	$4.12150
27. Income from operation	$1,937,689.55	$1,926,501.50	$2,477,255.89	$1,436,193.90	$1,122,820.01	$1,261,125.77
28. Income from operation per mile of road	$3,787.14	$4,065.72	$5,525.64	$4,074.42	$3,806.94	$4,409.84
Car mileage, etc.:						
30. Average number of passenger cars per train-mile [1]						
31. Average number of passengers per train-mile [1]	....	....	....	....	....	....
36. Average number of freight cars per train-mile	30.05	33.42	32.90	29.88	30.89	32.92
37. Average number of loaded cars per train-mile	17.31	18.74	17.85	15.92	16.31	18.23
38. Average number of empty cars per train-mile	12.74	14.67	15.05	13.96	14.58	14.69
39. Average number of tons of freight per train-mile [2]	....	....	....	....	....	....
40. Average number of tons of freight per loaded car-mile [2]	....	....	....	....	....	....
41. Average mileage operated during year	511.65	473.84	448.32	352.49	294.94	285.98

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[1] No passenger business conducted.

[2] This information not furnished.

[3] Figures represent result of computation; rate not given in report.

[4] Represents deficit.

Statement showing freight traffic movement (company's material excluded) compiled from annual reports of the Chicago, Lake Shore & Eastern Ry. Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1911[1]	1910[1]	1909[2]	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF MINES.										
Bituminous coal:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Freight originating on this road			1,010,693	1,380,587	1,573,567	1,045,887	920,650	812,929	829,284	762,277
Freight received from connecting roads and other carriers			518,071	262,743	237,712	406,864	169,936	175,865	298,210	343,802
Total freight tonnage			1,528,764	1,643,330	1,811,279	1,452,751	1,090,586	988,794	1,127,494	1,106,079
Coke:										
Freight originating on this road			135,634	2,422						
Freight received from connecting roads and other carriers			1,437,410	2,041,594	2,557,636	2,133,910	2,120,255	1,730,263	1,930,197	1,799,96
Total freight tonnage			1,573,044	2,044,016	2,557,636	2,133,910	2,120,255	1,730,263	1,930,197	1,799,964
Ores:										
Freight received from connecting roads and other carriers			959,523	1,045,975	1,176,751	1,074,106	1,011,905	605,520	1,027,219	915,737
Stone, sand, and other like articles:										
Freight originating on this road			1,330,625	1,549,395	787,555	808,337	878,195	205,163	233,301	171,194
Freight received from connecting roads and other carriers			571,679	695,912	1,151,236	744,622	506,994	809,369	850,870	834,544
Total freight tonnage			1,902,304	2,245,307	1,938,791	1,552,959	1,385,189	1,014,532	1,084,171	1,005,738
Total:										
Freight originating on this road			2,476,952	2,932,404	2,361,122					
Freight received from connecting roads and other carriers			3,486,683	4,046,224	5,123,335					
Total freight tonnage			5,963,635	6,978,628	7,484,457					
PRODUCTS OF FORESTS.										
Lumber:										
Freight originating on this road						12,057	4,868			
Freight received from connecting roads and other carriers			33,920	62,552	55,578	22,023	19,008	21,506	18,599	18,316
Total freight tonnage			33,920	62,552	55,568	34,080	23,876	21,506	18,599	18,316

Total:										
Freight received from connecting roads and other carriers	....	....	33,920	62,552	55,578	....	....	....	....	....
MANUFACTURES.										
Petroleum and other oils:										
Freight received from connecting roads and other carriers	....	....	11,140	9,242	11,372	12,734	11,208	5,110	11,536	8,741
Iron, pig and bloom:										
Freight originating on this road	....	....	304,339	184,425	381,659	399,412	369,302	365,564	401,434	450,113
Freight received from connecting roads and other carriers	....	....	1,366	4,284	16,600	42,447	906	2,644	16,683	19,890
Total freight tonnage	....	....	305,705	188,709	398,259	441,859	370,208	368,208	418,117	470,003
Iron and steel rails:										
Freight originating on this road	....	....	460,008	712,740	878,649	865,623	749,016	737,850	846,794	844,070
Freight received from connecting roads and other carriers	....	....	....	....	587	....	....	....	....	....
Total freight tonnage	....	....	460,008	712,740	879,236	865,623	749,016	737,850	846,794	844,070
Other castings and machinery:										
Freight originating on this road	....	....	909	2,576	1,633	2,802	4,293	5,629	890	1,097
Freight received from connecting roads and other carriers	....	....	38,923	61,429	25,807	16,739	7,089	14,168	5,417	6,617
Total freight tonnage	....	....	39,832	64,005	27,440	19,541	11,382	19,797	6,307	7,714
Bar and sheet metal:										
Freight originating on this road	....	....	414,731	430,420	633,408	449,682	295,876	238,188	351,713	280,657
Freight received from connecting roads and other carriers	....	....	33,619	36,108	31,045	44,669	25,461	17,123	23,062	4,802
Total freight tonnage	....	....	448,350	466,528	664,453	494,351	321,337	255,311	374,775	285,459
Cement, brick, and lime:										
Freight originating on this road	....	....	601,487	448,521	410,412	384,496	161,010	111,261	106,785	70,673
Freight received from connecting roads and other carriers	....	....	138,358	242,393	117,134	126,640	59,394	76,079	51,567	48,957
Total freight tonnage	....	....	739,845	690,914	527,546	511,136	220,404	187,340	158,352	119,630

[1] This information not furnished for the years 1911 and 1910, for the reason that this company for those years filed annual report, Form E, lessor companies, which information was not called for in such forms of reports.

[2] Report for 11 months ending May 31, 1909.

Statement showing freight traffic movement (company's material excluded) compiled from annual reports of the Chicago, Lake Shore & Eastern Ry. Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
MANUFACTURES—continued.										
Other manufactures:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Freight originating on this road			[1] 728,835	[1] 487,047	[1] 667,985	[1] 616,774	[1] 619,935	[1] 494,745	[1] 520,529	[1] 632,994
Freight received from connecting roads and other carriers			[1] 509	[1] 2,061	[1] 682	[1] 1,715	[1] 4,039	[1] 930	[1] 5,619	[1] 5,066
Total freight tonnage			[1] 729,344	[1] 489,108	[1] 668,667	[1] 618,489	[1] 623,974	[1] 495,675	[1] 526,148	[1] 638,060
Total:										
Freight originating on this road			2,510,309	2,265,729	2,973,746					
Freight received from connecting roads and other carriers			223,915	355,517	191,855					
Total freight tonnage			2,734,224	2,621,246	3,165,601					
Miscellaneous: Other commodities not mentioned above:										
Freight originating on this road			1,056,894	925,937	1,176,478	877,513	674,104	368,046	192,547	236,586
Freight received from connecting roads and other carriers			120,010	95,403	100,288	69,206	32,924	118,227	291,780	258,958
Total freight tonnage			1,176,904	1,021,340	1,276,766	946,719	707,028	486,273	484,327	495,544
Total tonnage:										
Freight originating on this road			6,044,155	6,124,070	6,511,346	5,462,583	4,677,249	3,339,375	3,483,277	3,449,661
Freight received from connecting roads and other carriers			3,864,528	4,559,696	5,482,428	4,695,675	3,969,119	3,576,804	4,530,759	4,265,394
Total freight tonnage			9,908,683	10,683,766	11,993,776	10,158,258	8,646,368	6,916,179	8,014,036	7,715,055

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[1] Represents billets, rods, and rail fastenings.

The CHAIRMAN. Please explain the traffic and transportation conditions of the Chicago, Lake Shore & Eastern Railroad.

Mr. FREER. It makes no report as to traffic, because its traffic is all included in the Elgin, Joilet & Eastern statement. The Chicago, Lake Shore & Eastern Railroad simply makes a financial report as a leased company, and the Elgin, Joilet & Eastern makes an operation report, as it operates the entire line.

The CHAIRMAN. Do you know whether the question of terminal allowances to the Chicago, Lake Shore & Eastern was investigated by the Interstate Commerce Commission in 1904?

Mr. FREER. They were investigated by the Interstate Commerce Commission in 1903 or 1904. I can't tell you the date.

Mr. REED. I am somewhat surprised that the committee should go into this matter of rates on the E., J. & E., for the reason that when Mr. Banks, the president of the road, was subpœned, he came before the committee and brought with him the fullest information on that subject, and I understood then that the committee had decided not to go into the question.

The CHAIRMAN. This is simply to illustrate the question of terminal allowances. For that purpose, I want it in.

Mr. FREER. Yes, sir; that investigation was made in 1904.

The CHAIRMAN. What was ascertained with reference to those terminal charges at that time?

Mr. FREER. There is quite a lengthy report here. It treats both of the International Harvester Co.'s terminal railroad properties and the Chicago, Lake Shore & Eastern of the steel corporation.

Mr. YOUNG. Was the steel corporation operating it at that time—1904?

Mr. FREER. Yes, sir; they so state in the opinion. They say in writing the opinion that the stock was entirely owned by the Illinois Steel Co. previous to the absorption of the Illinois Steel Co. by the United States Steel Corporation, and it is now exclusively owned by the latter.

The CHAIRMAN. Just what was the finding of the commission in that case?

Mr. FREER. The finding of the commission in that case was that the divisions or proportions or allowances made to these terminal roads were excessive, "grossly excessive," as they expressed it.

Mr. YOUNG. What was done in response to that opinion?

The CHAIRMAN. Explain what road that was.

Mr. FREER. The Chicago, Lake Shore & Eastern, and also the International Harvester Co.'s road, the Illinois Northern.

The CHAIRMAN. What were the allowances to the Chicago, Lake Shore & Eastern at that time?

Mr. FREER. It is different from different territories. It is specified in here.

The CHAIRMAN. What on coke?

Mr. FREER. They specified coke—they took that up particularly—the 70 cents per ton allowance on coke into South Chicago for a six or seven mile haul.

The CHAIRMAN. What did the commission find as to that matter of coke allowances?

Mr. Freer. They say as to the coke allowance. [Reads:]

> The Chicago, Lake Shore & Eastern would receive $840 for hauling this trainload from Indiana Harbor to its destination.

They say that to South Chicago $3 per car would be ample compensation.

The Chairman. What would $3 per car amount to?

Mr. Freer (reading):

> The cost of moving a trainload of coke from Indiana Harbor to South Chicago and moving the empty cars back again, for which the Lake Shore & Eastern receives $840, would not probably exceed $40.

The Chairman. Now, will you incorporate in the record so much of that report as touches on this allowance? Just indicate to the stenographer what he should copy in.

Mr. Freer. It is pretty hard to do that.

Mr. Young. Why not let the whole opinion go in?

The Chairman. Well, let the whole opinion go in.

Mr. Freer. I was going to say that there is a part of it about the International Harvester Co. road and about the Steel Corporation road.

Mr. Young. Are they separated?

Mr. Freer. They are separated in the beginning of their investigation. They tell what they found about the Illinois Southern, which is owned by the Harvester Co., and then go to the Chicago, Lake Shore & Eastern, but when they come to the conclusion they treat them together.

The Chairman. Just put the whole thing in as an exhibit, and let it be copied in.

The opinion of the Interstate Commerce Commission referred to is as follows:

Before the Interstate Commerce Commission.

No. 735, IN THE MATTER OF DIVISIONS OF JOINT RATES AND OTHER ALLOWANCES TO TERMINAL RAILROADS.

[Decided November 3, 1904.]

REPORT AND OPINION OF THE COMMISSION.

1. While there may be great objections to allowing shippers to build and operate railroads over which their traffic moves, such action is not prohibited by the act to regulate commerce; and the mere fact that the property of a common carrier is owned by the largest individual shipper over it, or that it was originally constructed for the purpose of doing the work of that shipper, furnishes no reason why it can not make joint rates and agree upon joint divisions with other railroads.
2. The act to regulate commerce prohibits a difference in charges as between shippers "by any special rate, rebate, drawback or other device" and the granting of any undue preference to any individual or species of traffic "in any respect whatsoever," and the Elkins amendment, requiring the pulication of tariffs in all cases, prohibits, under severe penalty, any practice on the part of the carrier "whereby any such property shall by any device whatever be transported at a less rate than that named in the tariffs * * * *or whereby any other advantage is given or discrimination is practiced.*" The manifest intention of the act to regulate commerce, especially as expressed in the Elkins amendment, is to strike through all pretense, all ingenious device, to the substance of the transaction itself; and where excessive divisions of rates are granted by a carrier to another carrier owned and controlled by a shipper, for the purpose of obtaining the traffic of that shipper, they benefit the shipper and operate as a rebate or other device to cut the tariff charge in violation of the law.

3. The International Harvester Co. owns the capital stock of the Illinois Northern Railroad Co. and a controlling interest in the Chicago, West Pullman & Southern Railroad Co., operating as terminal connecting roads in and about the city of Chicago between the plant of the Harvester Co. and various other industries and connecting roads leading to the Missouri River and other sections of the country. Until recently, the charge received for services by these terminal roads was a switching charge amounting to from $1 to $3.50 per car for the Illinois Northern and $3 per car for the Chicago, West Pullman & Southern. These lines now receive in many instances a division of the rate, which on lines reaching the Missouri River is 20 per cent, with the Missouri River division as the maximum. This amounts, on farm machinery, to $12 per car of 20,000 pounds as against the former maximum of $3.50 per car. A charge of $3.50 per car by the Illinois Northern and $3 per car by the Chicago, West Pullman & Southern would be reasonable for these switching services, and charges for such services in excess of these sums amount to unlawful preference in favor of the International Harvester Co.
4. The Chicago, Lake Shore & Eastern Railroad Co., owned by the United States Steel Corporation, is a terminal road operated between the Illinois Steel Co.'s works, near Chicago, and connecting with roads leading east, west, and south. It receives a division of 10 per cent of the rate to the seaboard; 15 per cent to Buffalo and Pittsburgh, and 20 per cent to the Missouri River and beyond, and in some cases obtains special divisions. These divisions are found to be grossly excessive for the service rendered and to afford unlawful preference to the United States Steel Corporation which owns and controls the Illinois Steel Co.

PROUTY, *Commissioner*:

In consequence of information that preferences were being granted to certain industries, by means of excessive divisions allowed terminal lines owned and operated by those industries, an investigation was undertaken into that subject in the spring of 1904. The scope of that investigation embraces such operations in various localities. The first hearing was held in Chicago in May, 1904, and had reference merely to conditions obtaining in and around that city. Subsequent hearings will have further reference to other localities, but inasmuch as conditions found to exist there are, without doubt, fairly typical of those prevailing elsewhere, it seems proper at this time to make some report on the facts developed, and to state our opinion touching those facts.

The International Harvester Co. was organized in 1902, apparently for the purpose of consolidating under one management several concerns previously engaged in the manufacture of farm machinery. It took over and is now operating the Deering Harvester Co., the McCormick Harvester Co., the Plano Co., the South Chicago Furnace Co., and perhaps others. In this discussion the McCormick division of the International Harvester Co. will be known as the McCormick Co. and the Plano division as the Plano Co. The International Harvester Co. now has the same interest in the Illinois Northern Railroad and the Chicago, West Pullman & Southern Railroad which the McCormick Co. and the Plano Co. formerly had, respectively.

The Illinois Northern Railroad Co. was incorporated in 1901, under the laws of the State of Illinois, with a capital stock of $500,000. While this capital stock did originally, and perhaps does to-day, stand in the names of various individuals, it was entirely paid for by cash furnished by the McCormick Co., was entirely owned by that company down to the time of its absorption by the International Harvester Co., and is to-day the property of the latter company.

What may be called the main line of the Illinois Northern Railroad extends from the works of the McCormick Co. at Twenty-sixth Street, in the city of Chicago, to Forty-ninth Street, a distance, as we understand the testimony, of approximately 5 miles. It also has trackage rights over the Chicago Union Transfer Railway from Forty-ninth Street to the Stickney Yard, so called, at Seventy-fifth Street. It owns 11 locomotives and a few flat cars and employs in the operation of its property an entire force of from 85 to 100 men. It maintains a freight station, at which a force of from 8 to 11 men are employed, through which it handles less than carload traffic for the general public, although its principal business is the handling of carloads, as hereinafter set forth. It waybills both carload and less than carload freight to destination.

The McCormick Co. at the time of the organization of this railroad company was operating an extensive plant at Twenty-sixth Street. As a part of this plant it had constructed and was maintaining within the limits of its own grounds some 17 miles of railroad track. It used two steam locomotives and several electric motors upon these tracks in the various operations connected with its business.

Three railroads made direct connection with these tracks at Twenty-sixth Street, namely, the Santa Fe System, the Burlington System, and the Chicago Junction

Railway, one of the switching lines in Chicago. These three railroads received freight from and delivered freight to the McCormick Co. at Twenty-sixth Street, and in receiving and delivering such freight performed without charge over the switch tracks of that company certain switching services, the extent of wihch did not plainly appear. This arrangement, involving as it did the operation of the engines of three distinct companies besides its own locomotives upon these switching tracks, was found unsatisfactory and inefficient by the McCormick Co., and the primary purpose in organizing the Illinois Northern Co. seems to have been to take over these tracks and thereby maintain and operate them under a single management.

The first tracks acquired by that railroad company were these private tracks of the McCormick Co. The contract under which these tracks were acquired and are operated was put in evidence by one of the witnesses having custody of the same, but has not been furnished the commission. It would appear from the testimony that at the present time the Illinois Northern Co. owns, maintains, and operates these tracks without any charge whatever to the McCormick Co., except in some cases where a car is moved from one portion of the yard to another, when $1 per car is collected for that service. No witness was able to state what the expense of maintaining and operating these switch tracks had been to the McCormick Co. before they were acquired by the Illinois Northern Railroad Co. At the present time it is entirely relieved of all expense in that connection, save what arises from the payment of the $1 per car, as above, the amount of which did not appear.

The Santa Fe connection with the McCormick switch tracks was over a switch track running from Forty-ninth Street to Twenty-sixth Street. It appeared that formerly this track had been owned by the Grand Trunk Railway Co. and leased to the Santa Fe upon condition that deliveries to or from the Grand Trunk Railway from industries along this track should be made by the Santa Fe for $1 per car. The Santa Fe now leased this track to the Illinois Northern upon condition among others that the Illinois Northern should assume the obligation of the Santa Fe to the Grand Trunk in the making of deliveries, and should also make delivery on account of the Santa Fe itself at the same charge of $1 per car. This switch track which is leased from the Santa Fe is now its main line from Twenty-sixth Street to Forty-ninth Street, and in addition to this it has trackage rights over the Chicago Union Transfer Railway from Forty-ninth Street to Seventy-fifth Street. By virtue of its own line and its trackage rights it makes connection with many of the most important railway systems entering the city of Chicago.

Numerous industries are located along the line of the Illinois Northern between Forty-ninth and Twenty-sixth Streets which are dependent upon this line for access to the various railroads by which their shipments are sent and received. These industries are served by the Illinois Northern both in handling carload and less than carload freight in and out. It appears that in case of all such industries except the McCormick plant, the switch tracks within the private limits of each industry are owned by that industry itself. These various plants are allowed to route their traffic, the Illinois Northern making whatever delivery is indicated by them, and are charged simply the Chicago rate, paying nothing, as we understand the testimony, in the nature of a switching charge, and receiving no part of the charges made by the Illinois Northern Co. It was said that something over 200 different industries were served by this railroad as above.

The Chicago, West Pullman & Southern Railroad is located in West Pullman, a part of the city of Chicago. It is about 4 miles in length, extending from the works of the Plano Co. to a connection with several important railway systems entering the city of Chicago, among which are the Wisconsin Central and the Rock Island. It was originally constructed by a real-estate syndicate for the purpose of affording railway accommodations to industries which might locate upon the land of that syndicate, having been incorporated under the laws of Illinois in 1900, and built soon afterwards. At first it was not well maintained or operated, and when the Plano Co. located there in 1903 it was thought necessary to devise some means for the improvement of the service obtainable on this road. Some other industries had been established along its line, and the capital stock of the company, which was $50,000 in all, was now bought up by these different industries. The greater part of the stock seems to have been acquired by the Plano Co., but a portion of it is owned by some of the other industrial companies.

This road at the present time has an equipment of one locomotive and a few flat cars. It employs only about 20 men. It maintains a freight station, at which it handles for the general public less than carload freight, but its principal business is in switching carload freight from its connections with various railroads to industries located along its line, and vice versa. It owns, maintains, and operates the tracks within the private grounds of the Plano Co. without expense to that company except that for certain movements a charge per car is perhaps made. It does not appear whether it performs a similar service for any of the other industries along its line, nor does it appear whether any of those industries are of such a character as to require the performance of such service.

There seems to be in and around the city of Chicago a district more or less accurately defined, which is known as the "switching limits." Within this territory deliveries are made and cars moved between various points for a switching charge, and this applies not only to belt lines and switching lines proper but to the similar operations of other railroads within those limits. If the Rock Island System, for example, were to move a car from some industry located upon its line to the tracks of the Burlington System, it would receive for that service, not a division of the through rates, but a switching charge measured usually by the car. These switching charges vary from $1 per car as a minimum to a maximum of $10.25 per car, the latter charge being made by the Chicago Terminal Transfer Co. for the local haul between the extremities of its line, the exact distance not appearing. Instances were given where a charge of $7.80 per car was imposed for a distance of 40 miles. The ordinary charge for a movement of from 2 to 10 miles seems to be in the vicinity of $3 per car, although this depends upon a variety of conditions and is governed by no rule of uniform application.

Until recently the Illinois Northern Railroad and the Chicago, West Pullman & Southern Railroad have both performed the service rendered by them upon this same basis. The maximum distance over which cars are handled by the latter company is, as already seen, not in excess of 4 miles, and the charge of that company was, until recently, $3 per car. The road has handled from ten to twelve thousand carloads per year, in addition to some less than carload business, and upon a $3 basis has been able to pay its operating expenses and show a net profit of about $4,000 per year. It was said in testimony that since its organization it had declared three dividends of 10 per cent each upon its capital stock. We think and find that $3 per car for the service rendered by this company is enough, and that anything above that is clearly exorbitant.

The charges imposed by the Illinois Northern Co. have varied from $1 per car, the price named in its contract with the Santa Fe, to a maximum of $3.50 per car. The operations of this company have uniformly shown a deficit. A statement filed upon the hearing covering the period between July 1, 1903, and February 29, 1904, showed a deficit of $12,000. It must be remembered, however, that this company was organized for the purpose of acquiring and operating the 17 miles of track within the private grounds of the McCormick Co., that these tracks form much the larger part of its total mileage, and that the expense of their maintenance and operation must be very considerable. There is nothing to show what the financial result from its operations would be if the McCormick Co. paid the same sum for this service which it had previously expended when the tracks were owned and operated by it. Judging from the experience of the Chicago, West Pullman & Southern, and from the charges which are ordinarily imposed for the performance of similar service under similar conditions in the vicinity, we think and find that $3.50 per car is a reasonable charge for the performance of these switching services, and that anything above that is unreasonable.

At the present time both of these railroads receive in many instances not a switching charge, but a division of the through rate. Over nearly all lines reaching the Missouri River these divisions apply, and are 20 per cent of the rate, with the Missouri River as a maximum. The rate on the farm machinery manufactured by the International Harvester Co. to the Missouri River is 30 cents per hundred pounds, with a minimum of 20,000 pounds or at least $60 per car. The proportion of the Illinois Northern upon this traffic when intended for the Missouri River or beyond would, therefore, be $12 per car, as against a former maximum charge of $3.50 per car. When the destination is such that the rate is less than 30 cents per hundred pounds the division would be correspondingly less, and, upon the other hand, when more than the minimum weight is loaded, the division might be greater. These divisions are allowed upon all traffic, both in and out, over the Illinois Northern and from other industries located upon its line, as well as the McCormick Co., although it appears that in some cases the movement is still on a switching basis, and it might well follow that with other commodities where the loading is heavy the division received by the Illinois Northern would be greater than $12 per car. Whatever has been said with respect to the Illinois Northern applies equally to the Chicago, West Pullman & Southern.

The International Harvester Co. owns these two railroads. Its officials are the officials of those roads in most instances. It absolutely controls the operations of the roads, as well as the routing of its own traffic. A large portion of its traffic is shipped to competitive points; that is to say, to points which may be reached from Chicago over more than one line of railway, and usually by several. While there was some little attempt at evasion, the testimony plainly shows that under ordinary circumstances the competitive traffic of the International Harvester Co. and of these two railroads would not be given to a line which did not allow these divisions so long as any line was available which did allow them. In other words, if one line granted the division other lines must follow or they could not obtain the business.

It appeared that these divisions were first granted to the Chicago, West Pullman & Southern by the Wisconsin Central Railway in September, 1903. The freight traffic manager of that company testified that they were granted by him as a matter of justice; that it was a universal rule observed between connecting railroads to allow the originating line a division of the through rate, which was never less than 25 per cent; and that since he know of no reason why this originating line should not have the benefit of that rule he had granted the 20 per cent division in question.

We are unable to accept this statement as representing the exact situation. There is in our opinion no analogy whatever between the Illinois Northern Railroad and the Chicago, West Pullman & Southern Railroad, and the connecting line which originates traffic under ordinary conditions. While these railroads may be railroads within the technical meaning of that term, while they may even fall within the definition of the act to regulate commerce, they have none of the incidents of a railroad proper. They were constructed for the sole purpose of moving cars from various industries to railroads which may be termed railroads proper. That service is essentially a switching service. It has been performed for years by these railroads upon that basis. It is performed by most other railroads in this vicinity under similar conditions upon that basis. If the Chicago, West Pullman & Southern delivers a car to the Rock Island for delivery to the Burlington System, the Rock Island receives for that service a switching charge of $3 per car, although it transports the car some 10 miles, as against a haul of 3 or 4 miles by the West Pullman road. Why should that road be allowed a division of $12 per car, leaving $9 for its service after payment to the Rock Island? The only difference which exists between the case of these two railroads and the case of other switching roads in Chicago arises from the circumstance that the International Harvester Co. is the owner of these roads. When the Wisconsin Central substituted the division for the switching charge it increased the compensation paid by it to the Chicago, West Pullman & Southern from two to three times. We find nothing in the location of the West Pullman which calls for this; we find nothing in the financial condition of that road which required, nor in the financial condition of the Wisconsin Central which justified, any such gratuity. We do not for a moment believe that it was a gratuity. We think and find that this act sprang, not from motives of generosity or the dictates of justice, but from the desire and expectation to thereby obtain from the International Harvester Co. traffic not otherwise obtainable. Corresponding divisions were subsequently granted by other competitive lines, because otherwise competitive business could not be obtained. We think and find that these divisions are not regarded by the carriers which grant them as a legitimate charge for the performance of this service, and that they do, in fact, in so far as they exceed a reasonable compensation for the performance of the service amount to a direct preference in favor of the International Harvester Co.

The Elgin, Joliet & Eastern Railway and the Chicago, Lake Shore & Eastern Railway were considered together for the reason that the management of these two properties is identical. In fact, as related to this investigation, there seems to be no analogy between the railroads themselves. The Elgin, Joliet & Eastern is properly a belt road extending entirely around the city of Chicago from Waukegan upon the north to Porter, Ind., upon the east. It has 205 miles of main track, owns 58 locomotives, and nearly 3,000 cars. Its capital stock is $6,000,000, and its bonds $8,500,000. It is not owned by, so far as it appears, nor does it especially serve, any particular industry. It is not apparently involved in this proceeding, unless it may be by reason of its relations to the Chicago, Lake Shore & Eastern and its owners. Whatever the fact may be, nothing of that sort appears upon this record, and it is unnecessary to state the facts with reference to that property.

The Chicago, Lake Shore & Eastern Railway is a creature of the Illinois Steel Co. Its stock was entirely owned by that compay previous to the absorption of the Illinois Steel Co. by the United States Steel Corporation, and it is now exclusively owned by the latter company. The present Chicago, Lake Shore & Eastern Co. seems to be the result of a consolidation of previous companies, and the properties operated by it are partly owned and partly leased. Neither its previous history nor its present status in this respect very clearly appears, nor do they seem material. Its connection with the Illinois Steel Co. is best understood by considering the extent and location of its various tracks, which are as follows: At South Chicago, 62 miles; at Joliet, 18 miles; at the Union Works of the Illinois Steel Co., 10 miles; at the north works of that company, 4 miles; and at Bay View, a suburb of Milwaukee, 18 miles. All the foregoing tracks are within the private limits of the plants of the Illinois Steel Co. at these various points. In addition to these private switch tracks it has a main track extending from South Chicago to Indiana Harbor, a distance of 6 or 7 miles, which connect with various railroad systems. It also has short lines extending from its various plants to a connection with the Elgin, Joliet & Eastern at various points. It leases certain trackage rights from the latter company, by which it obtains a connection with substantially all the railroads entering Chicago, and between all its various plants, except the one at Bay View, between which and its other tracks there is, apparently, no connection over its own iron. It has 1,213 employees, 4,539 cars, and 70 locomotives. It will be seen, therefore, that a very large part, probably the largest part of the operations of this company, consists in maintaining and operating the tracks within the various plants of the Illinois Steel Co.

The testimony indicates that the Chicago, Lake Shore & Eastern Railway has trackage rights over other railroads besides the Elgin, Joliet & Eastern. In the exercise of these trackage rights it handles large quantities of traffic between the several plants of the Illinois Steel Co. and also from the points of origin to those plants; as, for example, coal from the mine to the furnace. It was said that the quantity of traffic handled by this company from point of origin to destination was very large. In so far as this traffic is interstate, the railway company publishes a tariff, and the Illinois Steel Co. pays to the railway company the tariff rate so filed. For switching cars to and from the various plants of the Illinois Steel Co. which arrive or depart over connecting lines, the railway company seems to receive in nearly all cases a division of the through rate. We have seen that the railroads of the International Harvester Co. had no divisions with eastern lines; but the railway of the Illinois Steel Co. seems to be more favored in this respect. Its divisions with all eastern connections are 10 per cent on traffic to the seaboard, 15 per cent when the destination is Buffalo and Pittsburgh, and 20 per cent on business to the Missouri River and beyond. It does not clearly appear what division it receives upon traffic destined to the South. It further appears that in some cases it enjoys special divisions. The testimony shows, for example, that the Baltimore & Ohio has in the past, and does now, accord to the Chicago, Lake Shore & Eastern a division of 70 cents per ton on coke from the Connellsville region.

These divisions are plainly excessive. The rate from Chicago to New York on iron articles is 27½ cents per 100 pounds, with a minimum of 30,000 pounds. Assuming that a car contained only the minimum loading, the aggregate freight would be $82.50 per car, of which the Lake Shore & Eastern would receive $8.25 for moving the car to a connection with the eastern line at Indiana Harbor. Commodities taking this rate usually load considerably above 30,000 pounds, so that the amount actually received per car would be considerably more than that above given. Other destinations would show on the average a division fully equal to this. Coke from the Connellsville region moves in trainloads, in cars especially designed for that purpose. While the testimony in this case does not show either the car loading or the number of cars in the train, it is safe to say that the carload would equal 30 tons at least, and that the trainload would be 40 cars. The Chicago, Lake Shore & Eastern would receive $840 for hauling this trainload from Indiana Harbor to its destination.

While it can be confidently affirmed that these divisions are grossly excessive, the exact amount of that excess can not be determined with the same confidence that it could be in case of the Illinois Northern and the Chicago, West Pullman & Southern Railroads, for the reason that the services rendered by the Lake Shore & Eastern differs greatly in different cases, according as the movement may be to one or the other of its various plants. Its principal plant is evidently at South Chicago, and the distance which it ordinarily moves a car to or from that plant would not exceed 6 or 7 miles. For the rendition of this service, under the conditions prevailing, $3 per car would be ample compensation. The cost of moving a trainload of coke from Indiana Harbor to South Chicago and moving the empty cars back again, for which the Lake Shore & Eastern receives $840, would not probably exceed $40. If, however, the movement is to Joliet, a distance of 30 miles, or some of its other plants, in case of which the distance does not appear, it is evident that the cost of the service would be greater.

That these charges are extravagant is at least indicated by the financial report which this company makes to the Interstate Commerce Commission, although that report may be misleading, and we do not base our conclusions upon it. The capital stock of the Chicago, Lake Shore & Eastern is $650,000, and its bonded indebtedness is $3,200,000, upon which the interest aggregates $168,700 annually. The company earned from operations during the year ending June 30, 1904, $3,134,550, and its operating expenses were $1,698,356, leaving the income from operation $1,436,194. Its taxes for that year were $19,233, and its rentals paid $221,780. Apparently, therefore, after deducting its fixed charges and its taxes there would remain as a net result a sum equal to more than 150 per cent upon its capital stock. No dividend was paid. The company expended $195,000 in permanent improvements. What became of the balance the report does not show.

It will be noticed that out of these operating expenses the Lake Shore & Eastern maintains, without expense to the Illinois Steel Co., the miles of track within its private yards above set forth. When it is remembered that the South Chicago division of the International Harvester Co. has within the limits of its plant at South Chicago 6 or 7 miles of track, upon which it uses three locomotives, all of which it constructs and maintains without assistance from the railways, it will be readily understood that the construction and maintenance of all these private tracks of the United States Steel Corporation in and about Chicago must cost a large sum annually. Indeed, it is fairly inferable that the greater part of the operating expenses of this company are incurred in that manner. It should, perhaps, be said in this connection that under certain circumstances the Illinois Steel Co. pays the Lake Shore & Eastern Railway Co. a certain charge for the movement of cars within the private limits of these plants.

We are of the opinion in this case, as in the case of the Illinois Northern and the Chicago, West Pullman & Southern Railroads, that the only service for which the railways transporting the traffic of the Illinois Steel Co. to and from Chicago can properly charge is the switching service to and from the plants of that company; that the divisions in question are much in excess of any fair charge for that service; that they are intended and understood to be in excess of what would be a reasonable charge; that they are, in fact, paid to secure the traffic of the Illinois Steel Co. and that they do, in fact, amount to a preference in favor of that company by whatever amount they exceed a fair compensation for the service rendered. What that amount is can not be determined upon this record. It is clear that it annually aggregates what to the ordinary apprehension is an enormous sum.

Some testimony was taken with reference to certain other enterprises of this character, most of which are still in a somewhat embryonic state. Its chief value is to illustrate the tendency to seek preferences by this means, and it does not seem necessary to go into details here.

CONCLUSIONS.

The International Harvester Co. owns the Illinois Northern Railroad. Whatever profit accrues to that railroad inures to the benefit of the harvester company, its owner, alone. When any one of these lines leading from Chicago to the Missouri River pays to the Illinois Northern Railroad Co. $12 for the performance of a switching service, which is worth reasonably but $3, it gives to the International Harvester Co., the shipper of that carload of merchandise, $9. If these divisions which have been in effect since January, 1904, are legal, there is no practical limit to the extent to which the lines granting them may prefer the Intrenational Harvester Co. over other shippers. It is therefore a matter of great consequence to determine how far such practices are lawful. That preferences of this kind will be granted as a matter of fact, if they can be as a matter of law, abundantly appears from this investigation.

It must be assumed that the Illinois Northern Railroad is a common carrier within the provisions of the first section of the act to regulate commerce. It is incorporated as a railroad company under the laws of Illinois. It actually owns and operates a line of railroad. It maintains a freight station, at which it receives and delivers for the general public considerable quantities of less than carload freight. Its main business is the moving of loaded cars to and from various industries along its line, and in this capacity it serves more than 200 plants, besides that of the International Harvester Co. Manifestly there is no reason in law why this railroad may not make joint rates, file joint tariffs, and agree upon joint divisions, as other railroads do. We are not called upon to decide what the situation might be if this road were a private carrier maintaining switching tracks and switching cars to and from the McCormick works exclusively.

The mere fact that this road is to-day entirely owned by the largest individual shipper over it, or that it was originally organized and built for the purpose of doing the work of that shipper, is not, in our opinion, controlling against the legality of the transaction before us. While there may be grave objections to allowing shippers to build and operate railroads over which their traffic moves, the Interstate Commerce act contains no prohibition of that kind. This was so ruled by us in Central Yellow Pine Asso. *v.* Vicksburg, S. & P. R. Co. (10 I. C. C. Rep., 193). We also held In re Allowances to Elevators by the Union P. R. Co. (10 I. C. C. Rep., 309), that the Union Pacific Co. might pay an elevator company for transferring grain from its cars to the cars of its connections at Council Bluffs, so long as the transaction was in good faith, even though the greater part of the grain so transferred belonged to the elevator company receiving the compensation.

The vice in the present case is to be found in the thing done, not in the manner of doing it. A cardinal purpose of the act to regulate commerce is to prohibit all preferences between shippers, and the framers of that act and its amendments have evidently attempted to make the language sufficiently comprehensive to render every sort of preference, by whatever means attempted, unlawful. The second section of the original act provides that no greater compensation shall be collected of one shipper than of another "by any special rate, rebate, drawback, or other device." The third section provides that it shall be unlawful for a common carrier subject to the act to grant any undue preference to any individual or any species of traffic "in any respect whatsoever." The amendment of the act, approved February 19, 1903, commonly known as the Elkins bill, requires carriers in all cases to publish their tariffs, and prohibits under severe penalty, any practice upon the part of the carrier "whereby any such property shall, by any device whatever, be transported at a less rate than that named in the tariff, * * * or whereby any other advantage is given or discrimination is practiced."

We think these divisions, if not in violation of the express language of the second section of the original act, are plainly within the prohibition of the Elkins bill. When the Santa Fe Railways pays to the Illinois Northern Railroad $12 for the moving of a car loaded with the traffic of the International Harvester Co. from the McCormick works to its Corwith yard, a service which it might exact under its contract for $1, for the performance of which $3 is a reasonable compensation, which was never intended previous to January 1, 1904; and when it does this in order to obtain the traffic of the International Harvester Co., it thereby grants that company in effect a rebate of $9 upon that carload of freight. It certainly is guilty of an act by which an advantage is given and a discrimination is produced in favor of the International Harvester Co. As already said, if such a proceeding is not in violation of law, there is no limit to the granting of preferences to whatever shipper has the means of building and operating a railroad.

It is urged that all this is simply an arrangement between two connecting railroads; that there is no negotiations with the shipper and no payment to the shipper. This is a mere play upon words. The Illinois Northern Railroad Co. and the International Harvester Co. are one and the same thing. It is entirely immaterial whether this money goes in the first instnace into the treasury of the International Harvester Co. or that of its creature, the Illinois Northern Railroad Co. That subterfuges of this sort can not avail has been often decided, and was affirmed within the year by the Supreme Court of the United States in Interstate Commerce Commission *v.* Baird (194 U. S., 25, 48 L. ed. 860, 24 Sup. Ct. Rep. 563), in which it was held that it made no difference whether certain contracts were entered into with a railroad company itself or with a coal company the stock of which was entirely owned by the railroad company.

It is said that competition necessitates the allowance of these divisions, and that they are not of unusual amount. It is undoubtedly true, that many instances may be found in which divisions as great, or greater, than those under investigation are allowed by one connecting road to another for the performance of no greater service than is here involved; it is quite probable that the files of the commission may afford such illustrations; but such cases are not in point. There the railroads are principals. The division is granted to obtain traffic which the railroad controls, or to gain a corresponding advantage at some other point of connection, or in some other respect. Here the International Harvester Co. is the principal, not the Illinois Northern Railroad Co. It is to obtain the traffic of that company, a shipper, not a carrier, that these divisions are allowed; and it is because all parties understand that the Harvester Co. is the ultimate beneficiary that four times the sum which has in the past been accounted as reasonable is to-day paid for the performance of these switching services.

In a certain view, competition does not force the allowance of these divisions. In the same sense, competition compels the granting of most rebates and the allowance of most preferences. If one grants these divisions, all must grant them or lose the traffic. If one line pays the rebate all must follow; but this does not make the act lawful.

The manifest intention of the act to regulate commerce, especially as expressed in the Elkins bill, is to strike through all pretense, to the substance of the transaction itself. So, viewing this transaction, there is not the slightest doubt that the granting of these divisions is the allowance of a preference to the International Harvester Co., which is in violation of law. There is no substantial distinction between this case and that of Re Transportation of Salt from Hutchinson, Kansas (10 I. C. C. Rep., 1).

It has been seen that the Illinois Northern Co. handles much traffic aside from that originating at the McCormick plant, and that divisions are allowed upon much of this traffic. The question, therefore, arises: Does a division granted with respect to traffic not received from the International Harvester Co. amount to an unlawful concession in favor of that company? In our opinion, it does. While it might in a sense be held that a division paid for the handling of a carload of traffic from the International Harvester Co. was a rebate or a preference with respect to that particular car, still it is more correct to say that the whole arrangement is in the nature of a discrimination in favor of this shipper, and that discrimination is created by the allowance of divisions upon traffic not originating with it, just as really as upon traffic which it furnishes. The essential thing is that all divisions are allowed because the International Harvester Co. owns this railroad, and as a concession to that company. A general payment to a shipper or the performance of a general service for a shipper might be unlawful even though it were impossible to apply it to any particular traffic.

The question presented by the operations of the Chicago, West Pullman & Southern Railroad differs from that involved in those of the Illinois Northern in that the International Harvester Co. owns a controlling interest of the West Pullman Co., but has not the entire ownership. Other industries along its line are stockholders to some extent—just how far does not appear. This does not, however, in our opinion, change the situation. The fact that these shippers obtain by their part ownership of this road an advantage which inures to them in proportion to their ownership does not divest the transaction of its illegal character. A joint payment to two shippers may work a preference, if so understood and intended. In the case before us, while other parties are in reality interested, the International Harvester Co., is, without doubt, the overshadowing factor.

In our opinion, then, the payment of anything in excess of $3 per car in case of the Chicago, West Pullman & Southern, and of $3.50 per car in case of the Illinois Northern, under the circumstances developed in this case, is an illegal concession to the shippers owning those railroads. Of course, the compensation allowed these roads may be either by an arbitrary switching charge or by a division of a joint rate, the one being as legal as the other. We have stated what would in our opinion amount to a reasonable charge in dollars per car, because that has in the past been the usual method followed in arriving at the compensation allowed.

The Chicago, Lake Shore & Eastern, as found, is the creature of the United States Steel Corporation. The questions presented by its operations differ from those already discussed, chiefly in that the practices are of longer continuance and of wider scope. The International Harvester Co., through the medium of its railroads, obtains no division whatever from eastern lines; but the United States Steel Corporation, with its greater power, has been able to force from eastern connections divisions on all business. The International Harvester Co. has not yet been able to compel the railroads which handle its traffic to maintain its tracks or perform its switching service within its iron working plant at South Chicago; but the Illinois Steel Co. has for the last eight years obtained from the railways transporting its traffic compensation for the maintenance and operation of the miles of track which are located within its private works. In this respect the Steel Trust, to use the popular expression, is as far in advance of the Harvester Trust as the latter company is ahead of the ordinary shipper.

It has been seen that the Chicago, Lake Shore & Eastern, by virtue of its trackage rights, is enabled to handle large quantities of traffic from point of origin to destination. Whenever this movement is interstate, a tariff is filed with the commission and the rate paid by the United States Steel Corporation. In these operations there seems to be no violation of law, although there may be an advantage to that corporation. If the Steel Trust can build and operate a railroad cheaper than it can hire transportation from some other railroad, that is its privilege, assuming that it acts within the limitations of its charter.

This railroad also handles large quantities of traffic between connecting roads and the various plants which formerly belonged to the Illinois Steel Co. With respect to that traffic, it bears exactly the same relation to the United States Steel Corporation that the Illinois Northern does to the International Harvester Co. It is entirely owned by that corporation, and an excessive charge paid to it inures entirely to the advantage of that corporation. These extravagant divisions are allowed because it is owned by that corporation. To the extent that they exceed a reasonable charge for the performance of the service, they are, in our opinion, an unlawful preference in favor of that corporation. Just how far they do exceed what is reasonable can not be determined upon this record; but while we can not affirm the exact amount by which the Illinois Steel Co. has profited through these illegal practices in the past, or just how far the United States Steel Corporation is profiting to-day, the amounts are certainly enormous; sufficient, unquestionably, for the payment of dividends upon millions of capitalization.

This being a general investigation in which no specific charges have been formulated against particular defendants, no order can be made, nor would any order apparently add, to the prohibition of the statute itself. The inquiry will be continued into other similar practices, and whatever means the law affords employed to stop those above referred to.

Mr. Reed. Of course, you understand that that rate was reduced from 70 cents to 40 cents? The present rate is 40 cents.

The Chairman. That is what we are trying to get at now. Do you know whether that rate was actually reduced or not?

Mr. Freer. The International Harvester Co. reduced its rate to 10 cents—that is, its allowance was reduced to 10 cents a ton; the allowance to the Chicago, Lake Shore & Eastern was reduced from 70 cents to 40 cents on coke. That is what you are talking about?

The Chairman. Yes.

Mr. Freer. It was reduced from 70 cents to 40 cents.

Mr. Young. Was that done by the commission?

Mr. Freer. That was done by the railroad, following this report of the commission.

The Chairman. What did the commission say would be a sufficient compensation for that service.

Mr. Freer. Well, they say as to South Chicago $3 a car would be a sufficient compensation.

The Chairman. How much would that be a ton?

Mr. Freer. That would be practically 10 cents a ton at that time.

The Chairman. Do you know whether when they reduced this rate from 70 cents to 40 cents they also changed the through rate in such a way as to leave the railroad receiving the same remuneration for the haul as previously received?

Mr Freer. That is correct.

The Chairman. Explain that to the committee.

Mr. Freer. At the time of this 70-cent allowance, the rate on coke from the Connelsville district to South Chicago was $2.65, out of which the Chicago, Lake Shore & Eastern was allowed 70 cents, giving a net rate to the trunk line railroad of $1.95. Following this report of the commission, the allowance to the Chicago, Lake Shore & Eastern was reduced to 40 cents, and the rate on furnace coke was reduced from $2.65 to $2.35; so that the $2.35, less the 40 cents reduced allowance, still left the trunk line with $1.95 per net ton on coke, the same as it had formerly received.

Mr. Young. Who made the complaint?

Mr. Freer. That was investigated by the commission on its own motion, and there was no order entered. They simply reported what they found.

The Chairman. Did the commission at that time have the power to make an order?

Mr. Freer. The commission had no power at that time to make a rate or establish divisions of rates. The power they had was to condemn discrimination. That is what they treated this to be—a discrimination.

The Chairman. Can you give the committee the divisions which the E. J. & E. now receives as the successor of the Chicago, Lake Shore & Eastern?

Mr. FREER. They get 40 cents a ton on that coke to-day, which formerly paid them 70 cents; 35 cents a ton on coal to the old Chicago, Lake Shore & Eastern stations. They get 20 per cent, I think, of the through rate on business from those points to the Missouri River, 25 per cent of the through rate to St. Paul and Minneapolis, and 15 per cent of the rate to New Orleans and Mobile.

Mr. REED. I would suggest it would be very interesting to find out if Mr. Freer knows when these divisions were established. My information is that both of them were initiated when the E. J. & E. was owned by outside parties altogether.

The CHAIRMAN. Do you know when those were established?

Mr. FREER. I do not know.

The CHAIRMAN. Were these divisions made to the Chicago, Lake Shore & Eastern before the Chicago, Lake Shore & Eastern became a part of the Elgin, Joliet & Eastern?

Mr. FREER. Yes; that is mentioned in this report. I did not read that. This report mentions the fact that the Chicago, Lake Shore & Eastern, with all its eastern connections, receives 10 per cent on traffic to the seaboard, 15 per cent to Buffalo-Pittsburgh territory, and 20 per cent of business to the Missouri River and beyond.

Mr. DANFORTH. When was that? Does that report state?

Mr. FREER. That was 1904.

Mr. DANFORTH. That is a recommendation in that report?

Mr. FREER. No; this is a statement of what the other railroads were allowing the Chicago, Lake Shore & Eastern Railroad at that time.

The CHAIRMAN. What was the extent of that railroad at that time?

Mr. FREER. The report does not state what the mileage was. Possibly this large report will show it. In 1904, when that report was made, the single-track mileage of the Chicago, Lake Shore & Eastern, main-line mileage, was 97 miles. That is evidently an error, because 1905 shows 11 miles as main line and 98 miles——

The CHAIRMAN. There is a decimal in the wrong place there, is there not? It is a mistake in the decimal.

Mr. FREER. 1905 says single track mileage, main line, 11.35, and branches and spurs, 98.52. The previous year then shows 97.24, and does not divide it between the main line and branches and spurs.

The CHAIRMAN. Explain to the committee what those percentages were.

Mr. FREER. That is the proportion of the through rate which is allowed to this railroad for its share of the haul.

Mr. DANFORTH. Does that Interstate Commerce Commission report show for how long they have been allowing this percentage to the Chicago, Lake Shore & Eastern Railway?

Mr. FREER. I think not. It says that "the allowances made at the present time and for some time in the past" and they do not indicate the length of time. The only intimation of that is by comparison with the International Harvester Co. They simply say that the allowances to the Chicago, Lake Shore & Eastern have been of longer continuance and wider scope than the allowances to the International Harvester Co's. road; but they do not say how long they have been in effect.

The CHAIRMAN. Mr. Freer, the Indiana Harbor Belt Railway Co. is simply a terminal railroad to the E J & E, is it not?

Mr. FREER. The Indiana Harbor Belt has a line which is similar to the Chicago, Lake Shore & Eastern portion of the E J & E, then they have an outer belt line which is somewhat similar to the E J & E proper.

The CHAIRMAN. Do those roads practically parallel each other?

Mr. FREER. The inner belt of the Indiana Harbor parallels the old Chicago, Lake Shore & Eastern from Gary to South Chicago. The outer belt of the Indiana Harbor is much closer to the city of Chicago than the E J & E. The E J & E is a longer road and farther out from the center of the city.

The CHAIRMAN. This line, however, extending along the Lake front from South Chicago to Dune Park, parallels the Chicago, Lake Shore & Eastern?

Mr. FREER. That is correct.

The CHAIRMAN. Does the Indiana Harbor Belt receive similar proportions as those received by the Elgin, Joliet & Eastern on similar traffic?

Mr. FREER. It does not; no, sir.

The CHAIRMAN. Is the service of the Indiana Belt similar to that of the E J & E?

Mr. FREER. Yes, sir.

The CHAIRMAN. What does the Indiana Harbor Belt receive for this service?

Mr. FREER. The Indiana Harbor Belt; that is, I am now speaking of the inner belt——

The CHAIRMAN. Yes; the one that parallels the E J & E.

Mr. FREER (continuing). Parallels the Chicago, Lake Shore & Eastern. They are parties to what is called the Chicago Switching Tariff, and they accept a switching rate on traffic interchanged with connections, instead of getting a percentage proportion of the through rate. For instance, on traffic like coke, where the Chicago, Lake Shore & Eastern, owned by the E J & E, would receive 40 cents from Gary into South Chicago, the Indiana Harbor Belt would receive 10 cents.

The CHAIRMAN. Is that service identical?

Mr. FREER. Practically identical.

The CHAIRMAN. And one road receives 40 cents a ton and the other road 10 cents?

Mr. FREER. Yes, sir.

Mr. REED. The Indiana Harbor road does not do any terminal work at the plant, does it?

Mr. FREER. Of course it does not handle the business.

Mr. REED. Yes.

Mr. FREER. It would do the terminal work if it handled the business.

Mr. REED. I might suggest to the committee that the Indiana Harbor Belt Line is handled by the Lake Shore and Michigan Central jointly. It is simply taking it from one pocket and putting it in the other in giving it a larger division of these through rates.

The CHAIRMAN. You say that the rate on coal from the Pittsburgh district to Conneaut, Cleveland, and Ashtabula was hauled at 80 or 88 cents?

Mr. FREER. The coal from the Pittsburgh district?

The CHAIRMAN. Yes.

Mr. Freer. Lake coal?

The Chairman. Yes.

Mr. Freer. Eighty-eight cents.

The Chairman. Do the cars that carry this coal from the lake load with ore?

Mr. Freer. To a large extent they do; not all of them.

Mr. Reed. Mr. Chairman, I think that rate is only 83 cents on the Bessemer, is it not?

Mr. Freer. Eighty-three or eighty-five cents, I am not sure which. It is lower on the Bessemer than on the other lines. It is 88 cents from the Pittsburgh district. I am not certain whether it is 83 cents or 85 cents on that road.

Mr. Young. Which way is there the most traffic, east or west?

Mr. Freer. Do you mean from the lake front or to the lake front?

Mr. Young. Yes.

Mr. Freer. There is a larger movement from the lake front than there is to the lake front; that is, the ore moving from the lake is greater than the coal moving to the lake.

Mr. Young. So that the railroads are anxious to get the freight back?

Mr. Freer. They are anxious to handle coal to the lake front or otherwise they would be handling the cars in there empty.

Mr. Young. They would have to go back empty?

Mr. Freer. Yes, sir.

The Chairman. What did you say was the distance on this haul, approximately?

Mr. Freer. The distance on the haul of the coal you are speaking of now?

The Chairman. Yes; to Conneaut, Cleveland, Ashtabula, and so forth.

Mr. Freer. In the recent rate case before the Interstate Commerce Commission Ashtabula was taken as the objective point, and the distance from Pittsburgh to Ashtabula Harbor was figured at 148 miles. The average distance to all the ports, I think, the railroads claimed would be 160 miles. That would be the average to the various ports.

The Chairman. What is the rate on coal from the Fairmont district in West Virginia, say from Clarksburg to Lake ports, such as Lorain?

Mr. Freer. The rate has been 96¾ cents from the Fairmont district, which includes Fairmont and Clarksburg.

The Chairman. What is the rate from the Pocahontas district in West Virginia to Sandusky?

Mr. Freer. From the Pocahontas district to Sandusky, $1.12.

The Chairman. Is the volume of business from Connellsville and other districts greater or less than that from Fairmont and the Pocahontas districts?

Mr. Freer. It is greater from the Pittsburgh district.

The Chairman. Is there any back haul from West Virginia to the Lake ports?

Mr. Freer. Very little.

The Chairman. Is ore hauled from the Lake ports to Fairmont and Pocahontas, W. Va.?

Mr. Freer. Is ore hauled to those districts?

The Chairman. Yes.

Mr. FREER. Not to those districts. For instance, on the Fairmont haul there is some ore that moves down into the Wheeling district. It is part way on the return haul, and there is some ore moving over the Norfolk & Western down to Ironton and Hanging Rock, which is en route to the Pocahontas field.

The CHAIRMAN. Is the volume of business anything like as great as it is between Ashtabula, Conneaut, Cleveland, and Pittsburgh?

Mr. FREER. No; I would say not.

The CHAIRMAN. What is the rate on coke and coal from Connellsville to Youngstown, Ohio?

Mr. FREER. The rate on coke is $1.35. I think the coal rate is 75 cents or 85 cents. I could not be positive about that.

The CHAIRMAN. What is the distance of that haul?

Mr. FREER. From Connellsville district to Youngstown it is 134 miles.

The CHAIRMAN. What is the rate on coal and coke by rail from Connellsville to Gary and South Chicago?

Mr. FREER. Connellsville to Gary and South Chicago, on coke, is $2.50 to-day; on coal, $2.05.

The CHAIRMAN. The net rate to the railroad is how much?

Mr. FREER. $2.10 on coke and $1.70 on coal.

The CHAIRMAN. What is the distance from Connellsville to Gary and South Chicago?

Mr. FREER. About 530 miles.

The CHAIRMAN. What is the net rate per ton per mile to the carrier to Youngstown?

Mr. FREER. The rate per ton per mile?

The CHAIRMAN. Yes.

Mr. FREER. A little over 1 cent per ton per mile.

The CHAIRMAN. What is the net rate per ton per mile to the carrier to Gary and South Chicago?

Mr. FREER. On coke?

The CHAIRMAN. Yes.

Mr. REED. Mr. Chairman, this also is a matter pending before the Interstate Commerce Commission, this coke rate from Connelsville to Youngstown.

Mr. FREER. $2.50 rate to Gary and South Chicago would be 4.67 mills per ton per mile.

The CHAIRMAN. Now, can you give me the net rate per ton per mile on coke between Youngstown and Gary? Subtracting the charge from Connellsville to Youngstown, can you say what it would cost to transport that coke from Youngstown to Gary?

Mr. REED. Mr. Chairman, the jails are full of traffic men who got there by dividing the long haul into two short ones.

The CHAIRMAN. That is a very interesting conclusion.

Mr. FREER. Mr. Chairman, do you want me to deduct $1.35 from the $2.50?

The CHAIRMAN. Yes.

Mr. FREER. And apply the $1.15 for the balance of the haul from Youngstown to Gary?

The CHAIRMAN. Yes.

Mr. FREER. Deducting $1.35 from $2.50 leaves $1.15, and deducting 134 miles from Connellsville to Youngstown from the total mileage leaves a balance of 400 miles, and dividing the $1.15 by 400 miles would make it 2.88 mills per ton per mile.

The CHAIRMAN. Youngstown to Chicago?

Mr. FREER. To Chicago; yes, sir.

Mr. REED. Did you ever in your life figure a freight rate that way before?

Mr. FREER. I never did; no, sir.

The CHAIRMAN. Now, does that include the terminal charge allowed to the Elgin, Joliet & Eastern, in case it receives it?

Mr. FREER. Yes, sir; that includes the 40 cents.

The CHAIRMAN. Well, exclude that 40 cents; that is what I want to get at. Taking out that 40 cents, how much does the railroad get out of that haul from Youngstown to the point where it delivers this coke to the Steel Corporation's railroad?

Mr. FREER. 1.87 mills.

The CHAIRMAN. I can probably shorten this examination by several hours by having a chance to confer about this. There are a lot of questions here that I would like to ask, and I have not had a chance to talk these over.

The committee will adjourn until to-morrow morning at 10.30 o'clock.

Whereupon, at 4.30 o'clock p. m., the committee adjourned until to-morrow, Tuesday, March 12, 1912, at 10.30 o'clock a. m.

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No. 55

UNITED STATES STEEL CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

TUESDAY, MARCH 12, 1912

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

UNITED STATES STEEL CORPORATION.

Committee on Investigation of the
United States Steel Corporation,
House of Representatives,
Washington, D. C., Tuesday, March 12, 1912.

The committee met at 10.30 o'clock a. m., Hon. Augustus O. Stanley (chairman) presiding.

The Chairman. The committee will come to order.

TESTIMONY OF MR. GEORGE M. FREER—Continued.

The Chairman. Mr. Freer, we were asking you yesterday about these dock allowances at Conneaut, and there was something said about that dock being in the hands of the Interstate Commerce Commission. Do you know whether there is any question about dock allowances up before the Interstate Commerce Commission now or not?

Mr. Freer. Not that I know of at the present time; no, sir.

Mr. Reed. I have some information on that, if the committee wants it.

The Chairman. Yes; we want it.

Mr. Reed. On February 24 of this year Commissioner Lane, of the Interstate Commerce Commission, held a meeting with the repsentatives of all of the railroads engaged in carrying ore, and, among other things, it was arranged that:

> The railroad companies are to take over their docks, where they own the property and operate the same as their facilities, either through employees or contractors. If a contractor is employed, he is to receive cost plus some moderate profit. Where the dock property is owned, as at Fairport and Conneaut, by independent companies, these companies are to receive the same allowances as though they were contractors, plus a reasonable interest on their investment.
>
> It was assumed that the rates charged vessels for unloading would be reduced by the railroad companies, and that this would naturally affect amount charged vessels by independent docks.

The Chairman. What is that you are reading?

Mr. Reed. This is a memorandum of a meeting held by Commissioner Lane, of the Interstate Commerce Commission, with representatives of the different ore-carrying railroads. The meeting was held on Saturday, February 24, last.

The Chairman. Those are the general principles laid down by the commission. Do you know whether any particular rate is up for adjudication before the commission now?

Mr. Reed. There is no complaint on any particular rate charged by the dock companies, except the general complaint made by Commissioner Lane.

The CHAIRMAN. I understand that the Interstate Commerce Commission has repeatedly held that a mere plant facility is only to be reimbursed for the cost of the service, with a fair interest charge upon the money invested. It is not entitled to divisions of rates, or anything of that kind. A trunk line has certain rights and certain privileges; it is a public-service corporation to an extent that the plant facility is not, and the Interstate Commerce Commission has there laid down the broad general principle that these docks are essentially plant facilities, although the Government spends various sums of money to keep them in condition.

Mr. YOUNG. No; the Government spends no money.

The CHAIRMAN. Has not the Government dredged the Conneaut Harbor?

Mr. YOUNG. It improves the harbor, but it does not improve the dock.

The CHAIRMAN. As Mr. Carnegie said, he owns all the land around the harbor.

Mr. YOUNG. The Government has never spent any money on that.

Mr. REED. That dock is used for a great many different purposes by the ore-carrying concerns.

The CHAIRMAN. Are there any other vessels coming into that harbor except those of the United States Steel Corporation?

Mr. REED. Of course.

The CHAIRMAN. What are those?

Mr. REED. Lots of independent lines carrying steel company ore.

The CHAIRMAN. Mr. Carnegie testified that he bought all the land around the harbor that was available, and had practical control of the shipping facilities there.

Mr. WEED. The point I want to make is that the harbor is used for cement shipments, coal shipments——

The CHAIRMAN. Do they not all have to go over the Conneaut docks?

Mr. REED. No.

The CHAIRMAN. If it is unloaded in Conneaut Harbor?

Mr. REED. No; a good deal of it goes direct to the ferries from the railroad track. The Pere Marquette and Bessemer Railroad jointly operate a ferry service.

The CHAIRMAN. Are there any docks that receive the benefit from the Conneaut Harbor except the docks of the United States Steel Corporation or its subsidiaries?

Mr. REED. It is the only concern that owns ore docks; yes, sir.

The CHAIRMAN. That is what I am talking about.

Now, what I want to get at is, if you know of any case now being adjudicated before the Interstate Commerce Commission in which these rates are at issue?

Mr. FREER. I do not; no, sir.

The CHAIRMAN. This dock has been the subject of investigation by the Interstate Commerce Commission. Was that question of the reasonableness of the rates or the legality of the way in which they were distributed involved there?

Mr. FREER. The latter question was the question involved at that time.

Mr. Reed. You do not mean the Interstate Commerce Commission do you? Are you not speaking now of the indictments in Cleveland?

Mr. Freer. My understanding is that the Interstate Commerce Commission made the investigation, from which the indictments followed.

The Chairman. The Interstate Commerce Commission was then investigating the manner in which the proceeds from this dock were distributed, and that information was such as to result in the indicting of them.

Mr. Freer. It was not a question of the reasonableness of the charge, as I understand it.

Mr. Bartlett. A matter of discrimination?

Mr. Freer. A rebate, they claim.

Mr. Reed. But not a discrimination?

Mr. Bartlett. I do not know.

Mr. Reed. I explained it at yesterday's hearing.

Mr. Bartlett. I will read it.

The Chairman. Do you know whether the question of the reasonableness or unreasonableness of the rates, the 60 cents now charged by the ore-carrying road form the Mesabi Range is now before the Interstate Commerce Commission?

Mr. Freer. Not that I know of; no, sir.

The Chairman. What is the question before the Interstate Commerce Commission?

Mr. Freer. The only question that I know of that is now before the Interstate Commerce Commission on the ore rate is the complaint of a party named Lum against the Great Northern Railway. His complaint is not as to the reasonableness of the existing rate, but is directed to the fact that the Great Northern has refused to apply that rate to his prospective shipping point. They refused, as I understand it, to apply the rate because he was not in shape to ship any ore.

Mr. Young. Mr. Chairman, if it is important to find out, would it not be the better way to get the record? It is a very simple thing, and then we will know just what it is.

The Chairman. I thought Mr. Reed misapprehended the exact nature of this. Have you the record there [addressing the witness]?

Mr. Freer. I have the record here.

The Chairman. Will you put that in the record of these proceedings?

Mr. Young. Yes.

The opinion in the case referred to (No. 3716, Leon E. Lum *v.* Great Northern Railway Co.) is as follows:

Opinion No. 1658.

Before the Interstate Commerce Commission.

No. 3716. Leon E. Lum *v.* Great Northern Railway Co.

Submitted October 18, 1911. Decided November 7, 1911.

Upon motion of defendant to dismiss the complaint without further hearing:

Held, That the commission does not regard as material the allegation that complainant could not possibly ship ore within two years of the effective period of an order of this commission. If the commission prescribes a reasonable rate to-day for the movement of traffic which possibly may not move within two years, and the railway company voluntarily to continue that rate for a period longer than two years, it becomes the plain duty of the commission to institute a new investigation at the proper time and prescribe a rate which shall be just and reasonable under the circumstances and conditions prevailing at such time. Any man who is situated as is this complainant has a right to know what the lawful published rate on his proposed product is and will be for a reasonable period of time in the future. The commission can not deny the right of the complainant to secure the publication of a rate in advance of far-reaching and consequential business arrangements which can be profitably made when predicated upon one rate, and which can not possibly be made on a commercial basis when predicated upon a higher rate. The motion is overruled and the case will proceed to a determination in accordance with the act.

Leon E. Lum for complainant in person.

E. C. Lindley for Great Northern Railway Co.

REPORT OF THE COMMISSION ON MOTION TO DISMISS.

MEYER, *Commissioner:*

The complaint alleges the publication of an unreasonable rate for the transportation of iron ore from Grand Rapids, Minn., to Allouez Bay, in the city of Superior, Wis. A partial hearing was had at Superior on July 11, 1911, at which time the testimony of complainant was submitted. Upon the conclusion of complainant's testimony the counsel for defendant made a motion to dismiss the complaint, in support of which the following propositions were advanced:

(1) The commission has no jurisdiction on the record before it to enter an order prescribing a just and reasonable rate for the transportation of ore over the line of the Great Northern Railway Co. from Grand Rapids, Minn., to Allouez Bay, Wis., and requiring the Great Northern Railway Co. to publish and maintain such a rate for a period of two years.

(2) The defendant alleges in substance that the complaint is filed for an ulterior purpose and that the commission should decline to lend assistance to the furtherence of the purpose which the complainant desires indirectly to accomplish.

(3) The petition seeks the establishment of a rate from a point within a common-rate territory. Thirty million tons of ore move annually from other points in the common-rate territory. No actual shipper has appeared to complain of the present rate from the common-rate territory. It is the duty of the commission, in the absence of any complaint from any party actually interested in the common-rate adjustment and in the absence of any evidence tending to show the unreasonableness of the present rate, to dismiss the complaint.

The motion to dismiss was argued before the presiding commissioner, but because of the importance and novelty of some of the questions raised it was deemed desirable to hold the decision in abeyance and to have the motion argued before the commission en banc. The matter was set for argument on October 18, 1911, but because of the unavoidable absence of the complainant counsel for defendant refrained from making oral argument and the matter was thereupon submitted to the commission for its decision.

Briefly described, and disengaged from legal terminology, the situation seems to be substantially as follows:

Grand Rapids is a town of about 2,300 people, situated on the so-called ore line of the Great Northern Railway in the Mesabi ore district. The ore lands of the complainant are located approximately 3½ miles from the station at Grand Rapids. Other ore lands lie between the complainant's and the station as well as beyond the same.

The rate at present in effect from Grand Rapids to Allouez is 8.1 cents per 100 pounds—minimum, 50,000 pounds—this being the regular class D rate provided by western classification, and is published in Great Northern Tariff, I. C. C. No. 3385. A commodity rate of 80 cents per ton prevails from points in the territory in which Grand Rapids is situated to the head of the lake. The defendant has heretofore refused to publish a commodity rate applicable to Grand Rapids and apparently takes the position that it can not be required to publish such a rate until ore shall actually be offered for shipment. In defendant's brief the statement is made that it is willing to publish and maintain a rate for the transportation of iron ore from Grand Rapids that will be in line with its rates for similar transportation from other points on the Mesabi Range. This commodity rate of 80 cents per ton, applicable from points other than Grand Rapids, is published in Great Northern Tariff, G. F. O. 22252, I. C. C. No. A-3303.

The complainant is one of a number of owners of ore lands and of leases of ore lands in the vicinity of Grand Rapids, Minn. Together with his associates he has spent about $50,000 in work preliminary to the opening of the mines. The actual opening and operation of them, it is stated, will require an expenditure of some hundreds of thousands of dollars. The investment in the lands owned and leased, and upon which the preliminary work has been done, can yield no return unless additional money is invested and the properties are put into actual operation, so that ore can be shipped in relatively large quantities. Much of the ore is of a low grade, and approximately 2,000,000 tons are said to be of a higher grade. For present purposes we do not believe it to be necessary to determine the definite quantities and qualities of the ores which complainant believes he can ship under reasonably favorable conditions. The burden of his complaint is that the published distance-tariff rate of 8.1 cents per 100 pounds depresses the value of his lands so that it is impossible for him and his associates to sell, lease, or develop the same.

Every prudent man informs himself regarding freight rates before he establishes a business of any kind, especially one involving a heavy fixed investment. It is obvious that it may be profitable to mine ore when the rate is 80 cents per ton, while it may be absolutely impossible to secure money for the development of a mine when the only available published rate is $1.60 per ton. It is further possible that if a rate of 80 cents per ton does not make it profitable to develop certain lands, a lesser rate might accomplish this end. In other words, a difference in the rate of transportation may determine whether certain ore lands have commercial value or not, whether they shall be developed or lie idle.

Without in the least questioning the good faith of the statement the promise of the defendant to publish a rate in line with the then established rate from common territory when complainant's mine shall have actually been opened and ore offered for shipment can scarcely be regarded as sufficiently definite and certain to warrant hundreds of thousands of dollars being invested upon the strength of it. If it is necessary under the act to regulate commerce to have the freight actually upon the ground before the Interstate Commerce Commission can assume jurisdiction and prescribe a just and reasonable rate, what is to prevent a railway company, if its agent should see fit to resort to such perversity, from refraining to publish a rate on potatoes, for instance, until the potatoes are actually within sight and from refusing to publish such a rate before the potatoes are planted, or while they are being cultivated and growing, and after they have been dug but not yet brought to the station? What is there to prevent a railway company from refusing to publish a rate on grain, not before the grain land is purchased and plowed, not before the grain is ripe, nor before it is harvested and threshed, but not until after it has been sacked and stands at the side of the car ready to be loaded? In other words, the weakness of defendant's position in this respect seems to lie in its denial, as a matter of principle, of the right of a complainant to secure the publication of a rate in advance of far-reaching and consequential business arrangements, which can be profitably made when predicated upon one rate, and which can not possibly be made on a commercial basis when predicated upon a higher rate. In our opinion any man who is situated as is this complainant has a right to know what the lawful published rate on his proposed product is and will be for a reasonable period of time in the future.

Defendant lays much stress upon the allegation that complainant could not possibly ship ore within the two years of the effective period of an order of this commissioner. We do not believe that this is a material point. If the commission prescribes a reasonable rate to-day for the movement of traffic which possibly may not move within two years, and the railway company refuses voluntarily to continue that rate for a period longer than two years, it becomes the plain duty of the commission to institute a new investigation at the proper time and prescribe a rate which shall be just and reasonable under the circumstances and conditions prevailing at such time. It is to be noted, however, that the complainant believes that he can make sufficient progress in developing certain of his properties to ship ore within about eight months.

With respect to the contention of defendant that complainant is not qualified to make a complaint and that in the absence of any complaint from any party actually interested this proceeding should be dismissed, we call attention to the last sentence of section 13 of the act to regulate commerce:

> No complaint shall at any time be dismissed because of the absence of direct damage to the complainant.

The fact that all of the carriers operating in the Mesabi district and all of the carriers and parties interested in the ore rates are not made parties to this proceeding is immaterial in its bearing upon the legality of this complaint. A complainant can not be expected to search public and private records with the view of discovering all parties that may be interested in a certain proceeding. Full publicity attends every step of all proceedings before the commission, and it must be assumed that parties interested will take notice of what is going on. Other parties interested may intervene in the present proceeding if they so desire.

Quite a little is said in defendant's brief to the effect that complainant does not come before the commission with clean hands. There are cases in which "tainted hands" unquestionably justify and compel peremptory dismissal. We are not advised to what extent, if any, it may be possible to associate moral obliquities with this proceeding. It is the duty of the Interstate Commerce Commission to inquire into the vital point at issue, to wit, the reasonableness of the published rate on ore between Grand Rapids and Allouez. In our opinion, the complainant in the present proceeding was clearly within his legal rights when he filed his complaint, and it is the duty of the commission, after full hearing and investigation, to render a decision with reference to the reasonableness of the rate under attack. If the complainant has ulterior motives or hopes for indirect benefits not directly arising out of the rate in controversy, that is a matter which should not restrain this commission from performing its plain duty under the law. We express no opinion with reference to the merits of controversies which may have arisen in the past between the contending parties, nor do we consider it our duty to inquire into the equities of transactions not connected with the issues before us.

The motion to dismiss is overruled, and the case will proceed to a determination in accordance with the act.

The CHAIRMAN. Do you know whether any entry has been made in the case docketed before the Interstate Commerce Commission on the question involving docks in the distribution of rates that led to these indictments?

Mr. FREER. Whether there has been any answer made?

The CHAIRMAN. Whether any entry has been made.

Mr. FREER. I do not.

Mr. YOUNG. What is this? Is this a petition?

Mr. REED. This is a report of the commission on a motion to dismiss this Lum case. They refused to dismiss it and ordered them to proceed to a final hearing.

Mr. YOUNG. Do they set out there what the issues are?

Mr. REED. That is what I am trying to find.

The CHAIRMAN. Can you advise Mr. Young in that matter?

Mr. FREER. Yes, sir; they state what the issue is.

The CHAIRMAN. What is the issue?

Mr. FREER. The issue, as I stated a while ago, is that he asked that the rate which was in effect be extended to another point not included in their tariff.

The CHAIRMAN. Mr. Freer, what proportion of a rate on shipments from Pittsburgh to New England points, routing by way of the Bessemer & Lake Erie and Union Railroad, is allowed these roads?

Mr. FREER. Do you mean from the Pittsburgh district?

The CHAIRMAN. Yes.

Mr. YOUNG. To what point?

The CHAIRMAN. To New England points.

Mr. REED. Here is the issue in this Lum case, if I may inject it, so that it will go in in connection with the last question.

The CHAIRMAN. Well, the whole opinion goes in as an exhibit.

Mr. REED. Then the stenographer does not need to take this, with the permission of the committee.

The CHAIRMAN. No.

Mr. Reed thereupon read from the opinion in the Lum case.

Mr. YOUNG. Maybe that is the 80 cent rate.

Mr. FREER. It is the $1.60 rate. He asked for the 80-cent rate.

The CHAIRMAN. He was simply asking for the rate allowed other people to be applied to him.

Mr. FREER. That is it.

The CHAIRMAN. And they were charging him $1.60.

Mr. FREER. They were not charging anything, but that was the published rate. There was no ore moving, and that was the reason they did not apply the rate.

Mr. YOUNG. My Lum is located at Grand Rapids?

Mr. FREER. He is located at Grand Rapids.

The CHAIRMAN. The rate we have been discussing here was not under discussion before the Interstate Commerce Commission at all?

Mr. FREER. Not at all.

Mr. REED. I do not see how the Commission can establish any rate on ore without determining what is a reasonable rate. The fact that 80 cents is charged from some other shipping points will not limit them to 80 cents.

The CHAIRMAN. Determining whether $1.60 is a reasonable rate would not throw any light on this question; but, as I suggested, the whole record will go in.

Mr. REED. Yes.

The CHAIRMAN. What is the proportion to New York——

Mr. FREER. I have not given you those Boston figures yet.

The CHAIRMAN. Give us those.

Mr. FREER. Now, by that route through Butler and the Buffalo, Rochester & Pittsburgh, the Union Railroad gets 1 cent per hundred arbitrary. The Bessemer & Lake Erie get 15 per cent. By the route through Erie and the Lake Shore Railroad, the Union Railroad gets 1 cent arbitrary and the Bessemer & Lake Erie 22.4 per cent.

Mr. BEALL. One cent per hundred pounds?

Mr. FREER. One cent per hundred pounds; 20 cents per net or gross ton, as the freight may be rated.

The CHAIRMAN. What is the proportion to New York? How are these rates divided?

Mr. FREER. To New York via——

The CHAIRMAN. Just explain to the committee the cost of shipment and the division of the through rate.

Mr. FREER. New York, via Butler, the Union Railroad gets 1 cent arbitrary and the Bessemer & Lake Erie 15 per cent. Via the route through Erie, Pa., and the Lake Shore Railroad, the Union Railroad gets it 1 cent arbitrary and the Bessemer & Lake Erie 24.1 per cent.

Mr. BEALL. I notice that one of those allowances is in percentage and the other is an arbitrary allowance.

Mr. FREER. Yes, sir; that 1 cent is deducted from the rate; then the balance is pro rated on percentages.

Mr. BEALL. Can you reduce that 1 cent per hundred pounds to any percentage basis, so that we can form an idea as to what proportion of the total rate it is?

Mr. FREER. Of course, the 1 cent would be a percentage of any given rate, but it would be different on different rates.

Mr. BEALL. I understand.

Mr. YOUNG. That is 1 cent per what?

Mr. FREER. One cent per hundred pounds; 20 cents per ton.

The CHAIRMAN. Now, if the Union Railroad and the Bessemer & Lake Erie Railroad were one road, could that be done?

Mr. FREER. It could be done; yes, sir.

The CHAIRMAN. They could make two allowances to one road?

Mr. FREER. They could make two allowances to one road. I do not know whether this shows it, but at New York quite frequently the division sheets provide for a deduction of the terminal arbitrary at New York City, which is added to the proportion of the eastern road.

Mr. REED. How much?

Mr. FREER. Three cents as a rule.

Mr. REED. Per hundred?

Mr. FREER. Three cents per hundred. That is to cover the lighterage and other charges in the delivery at New York City.

The CHAIRMAN. That is a situation peculiar to New York?

Mr. FREER. That is a situation peculiar to New York; yes, sir. I think the reason this 1 cent is allowed the Union Railroad on the eastern percentages is to allow the Union Railroad to offset the arbitraries which are demanded at the eastern end.

The CHAIRMAN. What are the proportions to Buffalo?

Mr. FREER. To Buffalo by the route through Butler and the Buffalo, Rochester & Pittsburgh Railroad, the Bessemer & Lake Erie gets 55 per cent. That is a case where there is no separate division for the Union Railroad. Via the road through Wallace Junction and the New York, Chicago & St. Louis Railroad, the Bessemer & Lake Erie and the Union Railroad combined get 64.9 per cent.

The CHAIRMAN. What is the proportion to Chicago?

Mr. FREER. Chicago, via that same route, through Wallace Junction and the New York, Chicago & St. Louis Railway, the Bessemer & Lake Erie & Union Railroad combined get 33.3 per cent.

The CHAIRMAN. What is the proportion to East St. Louis?

Mr. FREER. Via Wallace Junction, the New York, Chicago & St. Louis Railway, and the Cleveland, Cincinnati, Chicago & St. Louis Railway, the Bessemer & Lake Erie, and Union Railroad receive 24.2 per cent.

The CHAIRMAN. Going now to the Elgin, Joliet & Eastern Railway, what is the rate on rails and fastenings from Chicago to Kansas City?

Mr. FREER. $2.75 a ton.

The CHAIRMAN. How is that rate fixed?

Mr. FREER. That rate is based on a rate of $1.75 from the Mississippi River to Kansas City, with a differential of $1 a ton, $1 above the Mississippi River, to make the through rate from Chicago.

The CHAIRMAN. What proportion of the rate paid to Kansas City and Missouri River points is allowed the E. J. & E.? What is the proportion of the rate paid to Kansas City?

Mr. FREER. Of the $2.75 rate from Kansas City?

The CHAIRMAN. Yes.

Mr. FREER. From what point?

The CHAIRMAN. Chicago.

Mr. FREER. Twenty-five per cent.

The CHAIRMAN. What proportion of the rate paid to St. Louis and Mississippi River points is allowed to the E. J. & E. from Chicago; from Chicago I am speaking about now.

Mr. REED. I would suggest that the value of this information is considerably impaired by the fact that the witness does not state what proportion of the mileage these roads carry it. For example, if the mileage of the E. J. & E. is 25 per cent of the haul, it can hardly be an offense if they are able to get 25 per cent of their rate.

The CHAIRMAN. Well, I will show the mileage.

Mr. FREER. To East St. Louis, 20 per cent.

The CHAIRMAN. What proportion of the rate paid to East St. Louis and Mississippi River points is allowed the E. J. & E.?

Mr. FREER. Twenty per cent, I think.

Mr. BARTLETT. Mr. Chairman, may I inquire here whether or not the witness has a tabulated statement as to the various rates before him, to these various points; have you?

Mr. FREER. I have not; no, sir. That is, I do not know just what all those points are. I have some of them here.

Mr. BARTLETT. What have you there?

Mr. FREER. I have East St. Louis, St. Paul, and the Missouri River points, which he has already covered, and New Orleans and Mobile.

Mr. BARTLETT. Have you it in such form that it could go into the record?

Mr. FREER. Yes, sir.

Mr. DANFORTH. Have you the mileage in those same statements?

Mr. FREER. The mileages are not here. I can furnish those.

Mr. DANFORTH. You have not those in the statements at all?

Mr. FREER. I have not the mileages; no, sir.

Mr. DANFORTH. Only the charges?

Mr. FREER. That is all.

Mr. YOUNG. Do those figures come from the Interstate Commerce Commission?

Mr. FREER. No; these come from the division sheets of the railroads. They are not filed with the Interstate Commerce Commission.

The CHAIRMAN. They are published by the railroad?

Mr. FREER. Yes, sir.

Mr. DANFORTH. Where are we going to get the mileages? You say we will come to that, Mr. Chairman.

The CHAIRMAN. Just take those maps and file them right now.

The maps referred to are attached:

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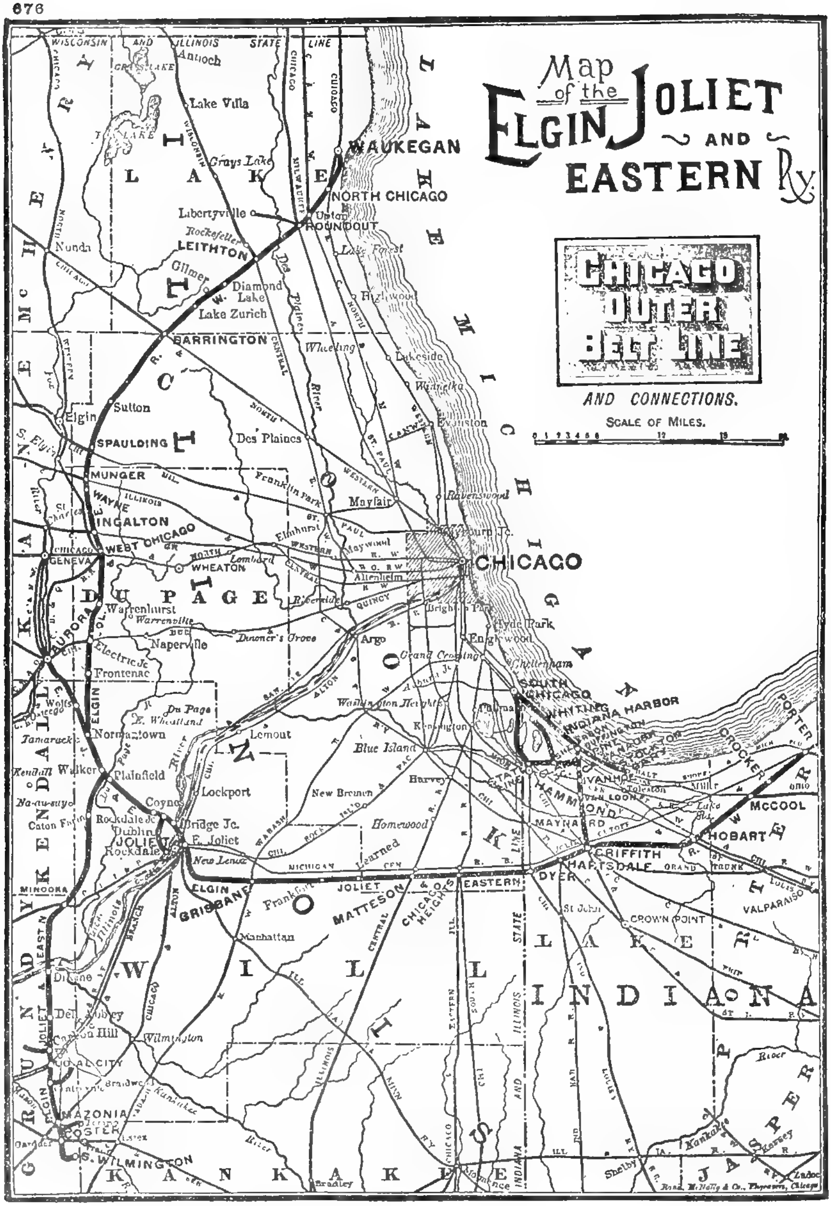
Map of the
ELGIN JOLIET AND EASTERN Ry.
CHICAGO OUTER BELT LINE
AND CONNECTIONS.
SCALE OF MILES.
WISCONSIN AND ILLINOIS STATE LINE
LAKE MICHIGAN
WAUKEGAN
NORTH CHICAGO
ROUNDOUT
LEITHTON
BARRINGTON
Sutton
SPAULDING
MUNGER
WAYNE
INGALTON
WEST CHICAGO
Elgin
GENEVA
AURORA
Normantown
Plainfield
Coyne
Bridge Jc.
JOLIET
E. Joliet
New Lenox
ELGIN
GRISBANE
Frankfort
MATTESON
CHICAGO HEIGHTS
EASTERN
DYER
GRIFFITH
HARTSDALE
HOBART
McCOOL
PORTER
CROCKER
CHICAGO
SOUTH CHICAGO
WHITING
INDIANA HARBOR
HAMMOND
MAYNARD
CROWN POINT
VALPARAISO
MINOOKA
COAL CITY
MAZONIA
COSTER
S. WILMINGTON
LAKE
McHENRY
COOK
DU PAGE
KANE
KENDALL
WILL
GRUNDY
KANKAKEE
LAKE
PORTER
JASPER
ILLINOIS
INDIANA
Rand, McNally & Co., Engravers, Chicago

Elgin, Joliet & Eastern Railway.

JOLIET DIVISION.

FREIGHT SERVICE ONLY.

Extra trains will be run as volume of traffic demands.

12	10	6	4	Mls.	*June 1, 1909.*	5	11	15	9	....
P. M.	P. M.	A. M.	A. M.	....	LEAVE] [ARRIVE	P. M.	P. M.	A. M.	....	....
*8.00	*2.00	*7.00	*4.00	0	Waukegan §	7.15	11.50	4.00	....	....
8.15	2.15	7.15	4.15	3.63	North Chicago	6.50	11.25	3.25	....	....
8.25	2.25	8.15	4.25	6.00	Upton	6.40	11.10	3.10	....	....
10.30	4.00	9.20	6.30	7.51	Rondout §	6.30	11.00	3.00	....	....
10.50	4.25	9.45	6.55	12.82	Leithton §	5.50	10.10	2.10	....	....
11.00	4.35	9.55	7.05	14.29	Diamond Lake	5.35	9.50	1.55	....	....
11.10	4.50	10.05	7.15	16.24	Gilmer §	5.27	9.42	1.45	....	....
11.30	5.15	10.20	7.30	19.88	Lake Zurich §	5.15	9.30	1.35	....	....
11.50	5.30	10.35	7.45	23.80	Barrington §	4.45	9.10	1.20	....	....
12.10	5.50	10.55	8.05	29.35	Sutton §	4.15	8.40	12.45	A. M.	....
12.45	6.25	11.25	8.35	35.47	Spaulding §	3.55	8.15	12.25	7.45	....
12.55	6.35	11.35	8.45	37.95	Munger	2.40	7.05	11.20	7.35	....
1.10	6.50	11.45	8.55	39.38	Wayne §	2.30	6.50	11.10	7.25	....
1.30	7.05	11.50	9.00	42.14	Ingalton §	2.20	6.35	11.00	7.15	....
1.55	7.30	12.15	9.20	43.81	West Chicago §	1.40	5.20	10.05	6.35	....
2.20	7.45	12.25	9.32	48.46	Warrenhurst §	1.25	4.55	9.45	6.15	....
....	....	....	....	50.43	Electric Junction	....	....	....	....	....
2.35	8.05	12.45	9.50	54.35	Frontenac §	1.00	4.35	9.25	5.55	....
2.55	8.25	1.00	10.10	60.23	Normantown §	12.15	4.10	9.00	5.25	....
3.05	8.40	1.10	10.20	63.13	Walker §	11.55	3.50	8.40	5.00	....
3.07	8.42	1.12	10.22	63.66	Plainfield §	11.45	3.40	8.15	4.30	....
3.20	9.00	1.25	10.35	68.09	Coynes §	11.30	3.25	8.00	4.15	....
3.25	9.05	1.30	10.40	69.71	Rockdale Junction §	11.20	3.20	7.55	4.05	....
....	....	....	....	73.31	Rockdale	....	....	....	....	....
6.30	12.15	6.00	3.00	73.09	East Joliet §	11.00	3.00	7.30	3.45	....
7.05	12.40	6.25	3.55	81.31	Brisbane §	6.35	11.35	3.30	2.00	....
7.30	1.10	6.55	4.15	87.12	Frankfort §	6.15	11.15	3.10	1.40	....
7.40	1.20	7.05	4.23	91.51	Learned §	6.00	11.00	2.45	1.20	....
7.50	1.30	7.15	4.30	94.65	Matteson §	5.45	10.45	2.30	1.05	....
8.05	1.40	7.35	4.40	98.23	Chicago Heights §	5.30	10.30	2.10	12.45	....
8.40	2.25	8.15	5.15	104.37	Dyer §	5.00	10.00	1.40	12.10	....
9.00	2.45	8.40	5.35	106.89	Hartsdale §	4.50	9.50	1.20	11.45	....
9.30	3.35	9.15	6.15	109.31	Griffith §	4.40	9.30	12.50	11.15	....
10.20	4.45	10.15	7.16	118.46	Hobart §	*4.10	8.50	*11.50	10.15	....
A. M.	5.15	10.40	7.35	125.19	McCool §	A. M.	8.25	A. M.	9.50	....
....	5.35	10.50	7.45	126.58	Crocker §	....	8.00	....	9.15	....
....	6.00	11.10	8.00	129.80	Porter §	....	*7.30	....	*8.45	....
....	A. M.	P. M.	P. M.	....	ARRIVE] [LEAVE	....	A. M.	....	P. M.	....

GARY DIVISION.

....	....	....	....	Mls.	*June 1, 1909.*	....	....	....	....	....
					LEAVE] [ARRIVE					
....	....	....	....	0	South Chicago	....	....	....	....	....
....	....	....	....	1.19	100th Street Yard	....	....	....	....	....
....	....	....	....	4.13	Whiting (Lake Front)	....	....	....	....	....
....	Freight service only.		....	7.33	Indiana Harbor	....	Freight service only.		....	....
....			....	9.01	Buffington	....			....	....
....			....	10.04	Stockton	....			....	....
....			....	10.89	Kirk Yard	....			....	....
....			....	13.78	Gary	....			....	....
....			....	0	South Chicago	....			....	....
....	....	....	....	10.89	Kirk Yard	....	....	....	....	....
....	....	....	....	10.99	Pine	....	....	....	....	....
....	....	....	....	13.39	Clarke	....	....	....	....	....
....	....	....	....	13.75	Curtis	....	....	....	....	....
....	....	....	....	13.48	Cavanaugh	....	....	....	....	....
....	....	....	....	....	ARRIVE] [LEAVE	....	....	....	....	....

Elgin, Joilet & Eastern Railway—Continued.

JOLIET DIVISION.

AURORA AND JOLIET.

Fht.	54	50	Mls.	*June 1, 1909.*	Fht.	55	57
	P. M.	A. M.		LEAVE] [ARRIVE		P. M.	P. M.
	†3.00	†7.45	0	Aurora §		1.25	7.40
P. M.	3.05	7.50	.94	Aurora Junction §	A. M.	1.20	7.35
*4.00	3.10	8.15	1.72	East Aurora §	10.25	1.00	7.15
4.30	3.25	8.30	6.42	Wolfs §	10.05	12.35	6.55
4.45	3.35	8.45	9.63	Normantown §	9.45	12.25	6.40
6.30	4.25	9.45		East Joliet §	*8.00	†11.10	†5.25
P. M.	P. M.	A. M.		ARRIVE] [LEAVE	A. M.	A. M.	P. M.

Extra trains will be run as volume of traffic demands.

WALKER AND SOUTH WILMINGTON—FREIGHT SERVICE ONLY.

72	70	Mls.	*June 1, 1909.*	71	73
P. M.	A. M.		LEAVE] [ARRIVE	P. M.	P. M.
*8.25	¶5.30	0	Walker §	2.00	10.50
8.35	5.50	4.27	Caton Farm §	1.45	10.35
8.50	6.15	11.64	Minooka §	1.20	10.00
9.06	6.40	17.81	Divine §	12.20	9.05
9.15	6.50	21.47	Dell Abbey	12.05	8.45
9.25	7.00	23.92	Carbon Hill	11.55	8.35
9.30	7.15	24.92	Coal City §	11.50	†8.30
P. M.	A. M.	26.72	Centerville	11.45	P. M.
		30.39	Mazonia §	11.20	
		31.41	Coster §	*11.15	
		32.72	South Wilmington §	A. M.	
			ARRIVE] [LEAVE		

GRIFFITH AND SOUTH CHICAGO—FREIGHT SERVICE ONLY.

14	2	Mls.	*June 1, 1909.*	7	13
P. M.	A. M.		LEAVE] [ARRIVE	A. M.	A. M.
†11.55	*8.00	0	Griffith §	4.20	11.00
12.05	8.10	1.51	Ridge	4.10	10.50
12.10	8.15	3.51	Van Loon	4.00	10.40
12.15	8.20	4.50	Sand Pit §	3.55	10.35
12.20	8.25	5.51	Ivanhoe	3.50	10.30
12.25	8.30	6.61	Cavanaugh §	3.45	10.25
12.35	8.35	8.57	Shearson §	¶3.30	10.20
Night	8.50	11.88	Hammond §	A. M.	10.10
	9.00	13.10	State Line §		*10.00
	A. M.	19.28	Ninety-eighth Street §		A. M.
			ARRIVE] [LEAVE *(South Chicago.)*		

SHEARSON AND WHITING—FREIGHT SERVICE ONLY.

14	Mls.	*June 1, 1909.*	7
Night		LEAVE] [ARRIVE	A. M.
†12.35	0	Shearson §	3.30
1.00	3.32	Whiting §	¶2.45
A. M.		ARRIVE] [LEAVE	A. M.

Trains marked* run daily; † daily, except Sunday; ¶ daily, except Monday. § Telegraph station .

Elgin, Joliet & Eastern Railway—Continued.

JOLIET DIVISION—Continued.

CONNECTIONS.

A., E. & C Ry	At Electric Junction and Wayne, Ill.
A., T. & S. F. Ry	At Joliet, Ill.
B. & O. R. R	At McCool and Curtis, Ind.
Belt Ry	At South Chicago, Ill., and Ninety-eighth Street.
C., C. & L. R. R	At Griffith, Ind.
C. & A. R. R	At Joliet, Ill.
C. & E. I. R. R	At Chicago Heights, Ill.
C., B. & Q. R. R	At Aurora, Ill.
C. & N. W. Ry	At West Chicago, Barrington, Upton, and Waukegan, Il
C. G. W. Ry	At Ingalton, Ill.
C., I. & L. Ry	At Dyer, Ind.
C., M. & St. P. Ry	At Spaulding and Rondout, Ill.
C., M. & G. Ry	At Joliet and Aurora, Ill.
C., R. I. & P. Ry	At Joliet and Minooka, Ill.
C. T. T. Ry	At Whiting and Hammond, Ind.
C., C., C. & St. L. Ry	At Coster, Ill.
Erie R. R	At Griffith, Ind.
Grand Trunk Ry. System	At Griffith, Ind.
Illinois Central R. R	At Matteson and Munger, Ill.
Indiana Harbor R. R	At Hammond and Indiana Harbor, Ind.
L. S. & M. S. Ry	At Porter and Pine, Ind.
M. C. R. R	At Hartsdale, Ind., and Joliet, Ill.
M., St. P. & Slt. Ste. M. Ry	At Leithton, Ill.
N. Y. C. & St. L. Ry	At Hobart, Ind.
P., Ft. W. & C. Ry	At Hobart and Clarke, Ind.
P., C., C. & St. L. Ry	At Hartsdale, Ind.
P. M. R. R	At Porter, Ind.
Wabash R. R	At Crocker, Ind., and Brisbane, Ill.

Mr. FREER. I will file the mileages. I have here the E. J. & E. mileages to various junction points, but I will have to take the Guide and figure the mileage from connecting lines from there on to Kansas City or whatever destination is selected.

Mr. REED. Just give us a few E. J. & E. mileages now, if the chairman will permit. For instance, to St. Louis, we get 20 per cent of the rates——

Mr. BARTLETT. I was trying to find if he had it all in the paper. We could ascertain it better by a tabulated statement than from an oral statement.

Mr. FREER. I will take the Chicago & Alton at Joliet and give the mileages from South Chicago to Joliet. Is that what you mean?

Mr. REED. That is a fair illustration of it. That would be fair.

Mr. FREER. I think that would be fair. That is about the center of the line. The mileage from South Chicago to Joliet is 65 miles, in round figures.

The CHAIRMAN. What is the other distance?

Mr. FREER. I have not that here. I can give you that. If you will give me all those points you want the divisions to, I can give you that information.

The CHAIRMAN. I will ask you to put in the record, in connection with these points that I have given you, the relative mileage of the roads over some feasible route.

Mr. YOUNG. I suppose what the chairman wants is not the feasible route, but the way it would actually go.

The CHAIRMAN. Well, yes; the rates by routes, as indicated on the published rate sheets. Of course they have to go that way or they would not be published.

Mr. FREER. You want that for the E. J. & E. division and the divisions which I gave you some time ago on the Bessemer division?

The CHAIRMAN. Yes.

Mr. YOUNG. And give the mileage of each.

Mr. FREER. And the proportion they received of the rate?

Mr. YOUNG. Yes.

Mr. FREER. I can figure that out and furnish it a little later.

The CHAIRMAN. I have prepared a map of the E. J. & E. and its connections. That is a matter of general knowledge, but it is very well to put it into the record.

Mr. REED. There are thousands of these divisions, and I think it might be interesting to know whether the witness simply picked out a few that he thought were unfair, or whether he has taken fair examples.

The CHAIRMAN. So far I have simply asked him about the divisions to various cities. This gentleman did not pick these out at all. These questions were prepared by Mr. Wooley and Mr. Mannington and myself, and the witness was not consulted about them.

Mr. REED. Then, may I ask whether you, in preparing the question, picked out these cities at random, or whether you took those you thought might show one thing or another?

The CHAIRMAN. Representative cities and, I will say, highly representative. In fact, you can tell from the character of the city. It would hardly be said that routes to New York, Buffalo, Chicago, and St. Louis, in the North and East and West, were not representative, because they are enormous consuming points, I believe, of the United States Steel Corporation. I will give you one little cross-road station, for example, if you want it. Take the rate on rails and fastenings to Jaudon, Mo., a flag station.

Mr. FREER. That is $2.75 to Jaudon.

The CHAIRMAN. That is the first case in which I have taken a flag station.

Mr. REED. Does the chairman consider this a live issue?

The CHAIRMAN. I do consider it a very live issue. On what road is Jaudon located?

Mr. FREER. The Kansas City Southern.

The CHAIRMAN. Is the mileage from South Chicago to Jaudon less or greater than it is to Kansas City?

Mr. FREER. About 30 to 35 miles beyond Kansas City on the Kansas City Southern—33 miles, I think.

Mr. BARTLETT. You say the rate to Jaudon is less than it is to Kansas City?

Mr. FREER. The same as it is to Kansas City.

Mr. BARTLETT. And they haul it 30 miles beyond?

Mr. FREER. Thirty-three miles beyond, and they take the same rate as Kansas City—$2.75.

Mr. BARTLETT. Is that being done now, since 1910?

Mr. FREER. Yes; there is nothing unusual about that.

The CHAIRMAN. There is nothing unusual about that; they are not complaining about that.

Mr. BARTLETT. Well, but the provision of the interstate-commerce law prohibits the charging of the same or less for a longer than for a shorter haul.

Mr. YOUNG. No; charging more for a shorter haul. They do not prohibit charging the same. They prohibit charging less.

Mr. BARTLETT. I meant to say charging more for a shorter than for a longer haul. They do not charge more; they charge the same here.

The CHAIRMAN. What proportion of the rate on steel rails, crossties, and fastenings does the Chicago & Alton make to Kansas City when billed by way of Kansas City and Jaudon?

Mr. FREER. The Elgin, Joilet & Eastern and the Chicago & Alton together receive $1.50 to Kansas City, out of the $2.75 rate to Jaudon.

The CHAIRMAN. What proportion of this rate is allowed to the E. J. & E.?

Mr. FREER. Forty cents.

The CHAIRMAN. Do you know of any other division similar to this one?

Mr. FREER. Not exactly similar to that. There are some similar, differing in degree, that is all.

The CHAIRMAN. I will get you to explain to the committee the difference between this rail and fastenings shipment I have asked you about and an ordinary shipment over that route to Jaudon.

Mr. FREER. The regular divisions from South Chicago to Jaudon allow the Kansas City Southern 30 per cent of the through rate, which would be 82½ cents, and the balance up to Missouri River or Kansas City divides on the regular Kansas City percentages, which would allow the Elgin, Joilet & Eastern 25 per cent or forty-eight and a fraction cents. The Chicago & Alton would receive under the regular division $1.54 and a fraction. Now, under this special division basis the Elgin, Joilet & Eastern receives 8 cents less than its regular division and the Chicago & Alton receives 44.4 cents less. The Kansas City Southern receives 42.5 cents in excess of its ordinary divisions.

The CHAIRMAN. In the event that the Kansas City Southern were the consignee of its own rails, how much would it receive for hauling its rails the distance from Kansas City to Jaudon, Mo.?

Mr. FREER. $1.25.

The CHAIRMAN. It would receive $1.25 for hauling its own rails over its own track 33 miles?

Mr. FREER. Yes, sir.

Mr. YOUNG. Under the regular division or under the special division?

Mr. FREER. Under the special division. Under the regular division it would receive 82½ cents.

The CHAIRMAN. Under this division it receives $1.25 for hauling its own rails over its own tracks a distance of 33 miles?

Mr. FREER. Yes, sir.

The CHAIRMAN. How much does the Chicago & Alton get out of this through rate, under this special arrangement?

Mr. FREER. $1.10.

The CHAIRMAN. For hauling it how far, approximately?

Mr. FREER. I think it is 500 and some miles.

Mr. BARTLETT. What do you mean by receiving so much for hauling its own rails over its own line?

Mr. FREER. He is assuming that these rails are for use on the Kansas City Southern.

Mr. BARTLETT. Yes.

Mr. FREER. And they are consigned to a point on its own lines and delivered to it at Kansas City. The regular rate is applied to final destination, out of which it receives a proportion of the rate for its haul, just as it would if the rails were consigned to John Jones at the destination, or somebody else.

Mr. BARTLETT. Taking it out of one pocket and putting it in the other?

Mr. FREER. They receive the division, which of course simply means that that is an advantage to them in the purchase of their rails.

The CHAIRMAN. What is the effect of this special rate that is made on rails?

Mr. FREER. You are assuming that these are Kansas City Southern rails?

The CHAIRMAN. Yes. What would be the effect of that special arrangement?

Mr. FREER. I would assume that the effect would be to reduce the price of rails to the Kansas City Southern.

The CHAIRMAN. From where? What rail plants could take advantage of that special rate?

Mr. FREER. Well, this is published only from South Chicago and Gary.

The CHAIRMAN. Are there any rails made there by anybody except the United States Steel Corporation?

Mr. FREER. Not so far as I know.

The CHAIRMAN. If rails are only made at those points by the United States Steel Corporation, this special rate amounts to an advantage of how much to the Kansas City Southern Railroad?

Mr. FREER. It amounts to an advantage of 42½ cents a ton over their regular divisions.

The CHAIRMAN. If purchased from the Gary plant, in other words, it is, in effect, a rebate of 42½ cents a ton on rails shipped over that particular road from that particular plant, over rails shipped from any other point?

Mr. FREER. Well, it is an advantage to them to that extent on rails from those points.

Mr. REED. Is the chairman of the opinion that the corporation ought to adhere to a fixed price for rails to all consumers through all seasons?

The CHAIRMAN. The chairman is of the opinion that a rate made in this way, which expires with that shipment, is a rate fixed while you wait, for the purpose of giving a special advantage to the recipient.

Mr. REED. In other words, they sell rails cheaper to that particular customer on that shipment?

The CHAIRMAN. No, sir; they make a rate which nobody else can meet, which is applicable on a particular commodity in a particular line, and is operated, as far as the shipment between that rate and the ordinary rate is concerned, as a pure rebate.

Mr. REED. The witness has not shown that all the other steel makers do not work the same scheme, if you want to call it a scheme.

The CHAIRMAN. If they do, they will be caught in the same trap. Here is a rate made lower than the ordinary rate, by 40 or 50 cents a ton, on a shipment of rails, and that rate is to expire with that shipment. It is a rate made overnight.

Mr. REED. Does the rate expire with that shipment?

The CHAIRMAN. Yes, sir.

Mr. REED. I did not understand the witness to say so.

The CHAIRMAN. Would not that be a violation of the law?

Mr. DANFORTH. Is what you call this special rate, which gives the supposed benefit to the Kansas City Southern, made for that one shipment?

Mr. FREER. It is not so stated. It may be in effect year in and year out. I do not know.

Mr. REED. What is the date of the tariff, Mr. Freer?

The CHAIRMAN. I will put the division sheets in evidence. It is stated on the division sheets.

Mr. FREER. Effective June 10, 1911.

Mr. YOUNG. Is it still in force?

Mr. FREER. As far as I know, it is.

The CHAIRMAN. The division sheet, as I said, so states.

Mr. BARTLETT. Have you the division sheet there?

Mr. FREER. Yes, sir; I have.

Mr. BARTLETT. Is there any memorandum there which shows it was a mere temporary rate?

Mr. FREER. This division sheet reads, as it must read, "Expiring with the tariff." Of course, the question is, When does the tariff expire? The division sheet would have to expire with the tariff.

Mr. DANFORTH. Is that the division sheet?

Mr. FREER. Yes, sir.

Mr. DANFORTH. When does the tariff expire?

Mr. FREER. I understand it is still in effect, so far as I know.

The division sheet is as follows:

DIVISION SHEET NO. 2 TO TARIFF NO. 2527-C.—THE CHICAGO & ALTON RAILROAD CO. IN CONNECTION WITH ELGIN, JOLIET & EASTERN RAILWAY, KANSAS CITY SOUTHERN RAILWAY.

Division sheet for joint freight tariff W. T. L. 18-D, I. C. C. No. A-198, applying on rails, new crossties, steel and track fastenings, carloads.

Issued June 10, 1911.
Effective June 10, 1911.
Expires with tariff unless sooner withdrawn or canceled.

From—	To—	Divisions in dollars and cents per gross ton on rails, new, and crossties, steel, and per net ton on rail and track fastenings.		
		Elgin, Joliet & Eastern Ry.	Chicago & Alton R. R.	Kansas City Southern Ry.
Gary, Ind.	Jaudon, Mo.	40	1.10	Balance.
Joliet, Ill.			1.50	Do.
South Chicago, I.		40	1.10	Do.

Route via Joliet, Ill., C. & A. R. R., and Kansas City.

C. A. KING,
FTM, C. & A. R. R., Chicago, Ill.
B. C. STEVENSON,
AFTM, C. & A. R. R., Chicago, Ill.
Issued by—
J. W. GRAHAM,
AFGA, C. & A. R. R., Chicago, Ill.

(46) AJN (100).
Division sheet No. 2 to tariff No. 2527-C.

Mr. Danforth. Then anybody who had a mill in that neighborhood could use those same rates?

Mr. Freer. At Gary, South Chicago, or Joliet.

Mr. Danforth. Are there any mills at Gary or South Chicago except those of the United States Steel Corporation?

Mr. Freer. I understand not.

Mr. Danforth. Do you know of any? [Addressing Mr. Reed.]

Mr. Reed. I do not know of any, but I do not know that this same division is not in force from all other steel mills.

The Chairman. All other steel mills can not avail themselves of that route. They can not ship that way.

Mr. Reed. I did not know that all other routes would have the same division.

Mr. Danforth. Do you know whether other mills on other roads could get the benefit of a similar division?

Mr. Freer. I do not know as to that. I do not know anything to the contrary.

The Chairman. I will ask you to explain to the committee the difference between this rate on rails, which expires with that tariff, and a rate on other commodities over those roads, charged by them between Chicago and Jaudon, Mo.

Mr. Freer. There is nothing unusual at all about the rate. The only thing unusual is the fact that they have provided special divisions for it. On other traffic going into Jaudon, the Kansas City Southern would take 30 per cent of the rate from Chicago.

Mr. Bartlett. How much do they take of this?

Mr. Reed. It seems to be just the opposite of a rebate. This is a case where the railroad gets the benefit.

Mr. Young. It works the other way.

The Chairman. The effect of it is to give the rail maker at Gary a rate on rails, and have his rails shipped in to Jaudon, Mo., at cost to the receiving carrier, with nothing else. He gets the benefit of it. The advantage of so much a ton to the consuming carrier, to the railroad that uses these rails, reduces the price of rails to that railroad by this 40 or 50 cents a ton.

Mr. Reed. Yes; and the Steel Corporation gets less for its product than it otherwise would.

The Chairman. Make your explanation, Mr. Freer.

Mr. Freer. I will answer your question, Judge.

Mr. Bartlett. If you please.

Mr. Freer. The regular division, as I stated, would be 30 per cent; under this special division they receive 45.4 per cent beyond Kansas City.

Mr. Bartlett. How does that benefit the rail maker?

Mr. Freer. I do not know that it benefits the rail maker.

Mr. Bartlett. Whom does it benefit?

Mr. Freer. I would say, on the face of it, it benefits the purchaser of rails—the railroad company.

Mr. Danforth. It benefits the railroad?

Mr. Freer. The purchaser of the rails, which we assume to be the Kansas City Southern Railway.

Mr. Young. If anybody else purchases them, it would be no benefit to the purchaser?

Mr. Freer. Because they would pay $2.75 to Jaudon—the through rate.

Mr. Young. The benefit is to the Kansas City Southern in either instance, whether their own rails or those of somebody else?

Mr. Freer. Yes, sir; that is true.

Mr. Bartlett. Taking it for granted that the Steel Corporation is the sole maker of rails at Joliet and Chicago and Gary, would that enable them to sell rails cheaper to the railroad?

Mr. Freer. By the reduction of the price to the railroad it would, of course, induce the railroad to place the order there.

Mr. Bartlett. Why?

Mr. Freer. Provided they could not get a similar advantage from other shipping points.

Mr. Bartlett. In what way would the purchaser of the rails get the advantage of such an arrangement as that?

Mr. Freer. Simply by a reduction in the cost of the rails delivered to it at Kansas City. Of course, the rate to Kansas City is $2.75——

Mr. Bartlett. Yes.

Mr. Freer. Now, this $2.75 rate from the mill applies to a point 30 miles beyond Kansas City.

Mr. Bartlett. Yes.

Mr. Freer. Now, to the extent that they can get a proportion of that $2.75, the greater proportion that they can get out of that $2.75, the less the cost of delivery to them at Kansas City is.

The Chairman. If this railroad could not get other connecting carriers to cut their rates in order to give that railroad an undue proportion of the rate, then it would, by this device, get its rails that much cheaper from Gary than it would anywhere else?

Mr. Freer. Yes, sir; that is correct.

Mr. Danforth. If there were no other rates from other mills to Kansas City?

Mr. Freer. Yes, sir.

Mr. Danforth. Do you know about that?

Mr. Freer. I do not know.

The Chairman. Not other rates, but other devices of this kind.

Mr. Freer. Other divisions of rates.

The Chairman. If these rails had been shipped under the same tariffs, the same divisions, as wheat and corn and other commodities are shipped from Chicago to Jaudon, what would have been the difference to the receiving railroad, the Kansas City Southern?

Mr. Freer. The difference between the 30 per cent they ordinarily receive and this special division, which allows them about 45.4 per cent of the rate.

The Chairman. What advantage is it to the Chicago & Alton to cut itself out of its usual per cent of this haul?

Mr. Freer. The advantage to the Chicago & Alton was to secure the traffic.

The Chairman. Why would it not make that rate, then, on all other commodities to secure the traffic?

Mr. Freer. Well, they might, if it were a volume of business that they were particularly anxious to secure.

Mr. Danforth. There were no other commodities going to this flag station besides the rails?

Mr. FREER. None that I know of. This particular division sheet refers to that particular traffic.

Mr. DANFORTH. The only commodity that could be carried over the Chicago & Alton, in connection with these other roads, on this ratio to this flag station was rails?

Mr. FREER. On this tariff.

Mr. DANFORTH. As a matter of fact, there were no other commodities?

Mr. FREER. I do not know as to that.

The CHAIRMAN. Would this flag station be such a point as you would expect rails to be distributed from?

Mr. FREER. It is a local station on the Kansas City Southern.

The CHAIRMAN. Is it usual to ship vast quantities of rails to a flag station?

Mr. FREER. Yes; I would say it is not unusual for railroad companies to consign their material to some outlying station.

Mr. REED. As a receiving yard?

Mr. FREER. As a receiving yard, for that very purpose.

The CHAIRMAN. What purpose is that?

Mr. FREER. To secure a proportion of the rate.

The CHAIRMAN. Whenever a railroad—I do not care what railroad it is—consigns vast shipments of rails to a flag station, or to some obscure point like that, when they are really destined to some other point, they do it for the purpose of securing a division of a rate that they do not want to make public? Is not that the purpose of the road in doing that sort of thing?

Mr. FREER. One purpose undoubtedly is to secure a division of the rate. It is not always consigned to an obscure flag station. It may sometimes be consigned to a central point for distribution, so that they not only get a division of the rate, but they get shipments at a point from which they can distribute very conveniently.

The CHAIRMAN. It is a device for manipulating the rates above or below the usual and customary rate on commodities generally, is it not?

Mr. FREER. Well, it is a scheme to secure the biggest share of the rate that they can, and reduce the cost to themselves to that extent.

Mr. GARDNER. Is that the only motive?

Mr. FREER. Is that the only motive?

Mr. GARDNER. Yes.

Mr. FREER. That is the only motive that I could think of.

Mr. YOUNG. Do you know whether these rails would be used in an extension from this flag station, or do you know where they went to after they got there?

Mr. FREER. I do not; no, sir.

Mr. YOUNG. For all you know, they were used at that point?

Mr. FREER. They may have been for all I know to the contrary.

Mr. YOUNG. You do not know anything about it?

Mr. FREER. No, sir.

Mr. YOUNG. So that no conclusion can be based upon it?

Mr. DANFORTH. How vast are these shipments that these rates were made for, or these divisions?

Mr. FREER. I know nothing about the quantity at all that moved on these divisions.

Mr. Reed. Right in that connection I want to call attention to Opinion No. 1772 of the Interstate Commerce Commission, where they passed on this matter of railroad materials and their transportation on different systems or divisions of rates as opposed to the general commercial shipments, and that question is now pending before the Supreme Court on appeal from this opinion of the Interstate Commerce Commission.

Mr. Young. What was the opinion of the commission?

Mr. Reed. It was opposed to a different division of rates.

The Chairman. It denounces this very practice.

Mr. Reed. Denounces this practice of the railroads, and on appeal of the Pennsylvania Railroad and the Baltimore & Ohio the question is now pending before the Supreme Court of the United States. It seems to me, Mr. Chairman, that it is not fair to the Steel Corporation to work up an elaborate conspiracy of rebates based on the hypothesis that other steel companies no not ship according to the same division of rates. This witness admits that he does not know what the divisions of rates are from other steel mills.

The Chairman. Mr. Reed, if a dozen men were shot down on the street by a score of others and one of those men would get into the clutches of the law, would you, as a lawyer, before a court, argue that there were 19 other men just as guilty, who had never been indicted, and ask to have that case dismissed because the others had not been apprehended?

Mr. Reed. No; but I doubt whether I would hold him up and compare him to his disadvantage with the other 19.

The Chairman. I am not comparing anybody; I am not saying that the other companies do not do this. They may. There are many things that this committee has investigated with respect to the United States Steel Corporation to which other concerns are addicted. There are practices of the United States Steel Corporation, I would say, without designating the practices, that I would regard as reprehensible, to which it is less addicted than other concerns, but the purview of our inquiry confines us to the operations of the United States Steel Corporation, and to that extent it possibly is to be regretted that we have not time or authority to investigate the steel industry as a whole instead of taking this, the largest concern in it, as an example; but we are investigating the practices of the Steel Corporation just as the acts of an individual are investigated without regard to the acts of others.

Mr. Reed. Quite true; but I understood——

The Chairman. If this device is wrong, and if such a device is being practiced by industrials owning common carriers, Congress ought to know it, and you will suffer no injustice in the long run, because we can not inflict any penalty. All we can do, if we find these things are reprehensible, is to recommend laws that will operate upon your competitors in the same way.

Mr. Reed. That is true; but awhile ago you told me in answer to a question that you thought this was a rebate or device by which the Steel Corporation got an advantage over its competitors. You do not say what its competitors are doing.

The Chairman. I will explain that, but I do not care to go into a discussion. I do not believe you could have induced the Chicago &

Alton to cut its rate as mercilessly as it did in this case unless you had behind it the power and enormous tonnage of your works at Gary and at Joliet and the force or power of this great trunk line system unless you had owned these common carriers. Unless you had this enormous tonnage you would never have secured this rate.

Mr. REED. I do not think there is any evidence that we did secure the rate. The Kansas City Southern secured the rate.

The CHAIRMAN. It conceded the rate.

Mr. REED. We have nothing to do with the divisions.

The CHAIRMAN. The Chicago & Alton made divisions by which it was a loser, a heavy loser, and it did not take that money out of its pocket for fun. But, let us get back to this question——

Mr. BARTLETT. May I ask a question?

The CHAIRMAN. Certainly.

Mr. BARTLETT. Did anything appear to show that this rate was made by the seller of the rails? In other words, did they sell the rails f. o. b. or were they to be delivered to point of destination?

Mr. FREER. I could not tell you that, sir.

Mr. BARTLETT. It might be to the benefit of the Steel Corporation as the seller of the rails if they paid the freight.

Mr. REED. I do not see how it could. They had to pay the rate and it is none of their affair how it was divided.

Mr. DANFORTH. Is there any evidence that this rate was used in the case?

Mr. FREER. No, sir.

Mr. DANFORTH. No shipment by any shipper was ever made under this division of the rate?

Mr. FREER. No, sir; there is no evidence that I know of. All I have is the sheet itself.

Mr. GARDNER. Was there some evidence presented before the Interstate Commerce Commission in this case, Mr. Reed?

Mr. YOUNG. That was not this case. It was a case involving a similar question.

Mr. BARTLETT. Do you know anything about that case?

The CHAIRMAN. The case to which Mr. Reed refers.

Mr. FREER. I assumed that he was speaking about the rail fuel rate, but I did not recognize the case by the number he gave.

Mr. BARTLETT. Do you know anything about the restricted rate case?

Mr. FREER. That was the one I had in mind. Whether that is the one to which he referred or not, I do not know.

Mr. BARTLETT. Did it appear in that case that the rates had ever been used?

Mr. FREER. That was a case involving the rates on coal for railway fuel where the commission held that the same rate should be paid by the railroad as was paid by anyone else.

Mr. REED. We will get these for you and give you the exact dates.

The CHAIRMAN. Do you know whether a similar rule was made by the commission in the Hichman case?

Mr. FREER. In the Hichman case they criticized the existing practice. They made no order at that time.

The CHAIRMAN. When was that case decided?

Mr. FREER. I could not tell you definitely. About three years ago.

The **Chairman.** As I understand, this is what Mr. Reed speaks of. It is a device used among railroads, occasionally at least, when they are the consignees of coal or rails or ties, to ship those ties, rails, or coal to some other point on their own line and then to transport them a short distance and get an inequitable division of the rate.

Mr. **Freer.** That is——

The **Chairman.** And all the roads carrying this commodity make a cheaper rate to other railroads in order to get the carriage, and what would be a rebate to an ordinary consignee becomes a division, a device, when practiced by a carrier, who, in that case, is the consignee; is not that true?

Mr. **Freer.** That is true on some material. That is not the case on the coal. On the coal, instead of making a division, they simply published a special rate to this junction point lower than the rate which applied on coal for other people—commercial coal.

The **Chairman.** That was a more naked violation of the law.

Mr. **Freer.** Instead of making a division it reduced the rate.

The **Chairman.** Which made a rebate.

Mr. **Freer.** And restricted that rate to coal for consumption by steam railways.

The **Chairman.** The same result was obtained in that case and in the case you have mentioned, but the device was proved.

Mr. **Freer.** The same result.

Mr. **Reed.** The chairman does not blame the farmer that grows the timber or the Steel Corporation or coal company for that——

The **Chairman.** Not unless he is a party to it, unless he is in the tie business and, to a great extent, also in the railroad business.

Mr. **Bartlett.** Do you say that this is a general practice among the railroads that the chairman has been talking about?

Mr. **Freer.** It has been quite general.

Mr. **Bartlett.** Do you know anything about——

Mr. **Freer.** Not only on rails, but on crossties and other material, such as lumber.

Mr. **Bartlett.** Do you know of an instance where these roads owned by the Steel Corporation engaged in that practice?

Mr. **Freer.** I do not know that they do. As it has been quite a general practice, I would assume that they have done it, possibly to the same extent as other roads. I do not know that to be a fact.

Mr. **Reed.** Assuming them guilty until proved innocent. I think that is the basis on which we are proceeding.

Mr. **Bartlett.** I do not think you could justify that from anything that I said.

Mr. **Reed.** Nothing that you suggested; no, sir.

Mr. **Bartlett.** On the contrary, my mind is always open.

Mr. **Reed.** I was speaking of this matter of the rebate of the Kansas City Southern.

The **Chairman.** On a shipment of rails or other steel products from South Chicago or Gary to New Orleans, what proportion is allowed the E. J. & E.?

Mr. **Freer.** Fifteen per cent.

The **Chairman.** How great a distance does its road haul the shipment? Give me the mileage in that case, as an illustration. The route is over the Illinois Central.

Mr. **Freer.** Over the Illinois Central?

The CHAIRMAN. For the purposes of this examination, give us the mileage, approximately.

Mr. FREER. Forty-four miles, approximately.

The CHAIRMAN. Over the Elgin, Joliet & Eastern?

Mr. FREER. Yes, sir.

The CHAIRMAN. How far over the other carriers?

Mr. FREER. I have not that figure.

The CHAIRMAN. Do you know approximately how far?

Mr. FREER. I would not like to guess.

The CHAIRMAN. How far would it be over the Elgin, Joliet & Eastern if routed over the Chicago & Eastern Illinois?

Mr. FREER. About 4 miles less; about 40 miles, probably.

The CHAIRMAN. Have you any information, Mr. Freer, which would be helpful to the committee in respect to terminal allowances on industrial lines when the same are owned by the shippers?

Mr. FREER. The only information I have is this statement of the Interstate Commerce Commission in its last report to Congress, which you undoubtedly have, where they mention that specifically.

The CHAIRMAN. Just read that. It is short. Just read it into the record.

Mr. FREER. This is in the report to Congress of December, 1911, page 12:

> The evils most difficult to detect and to prove to-day are those arising out of the community of interest of certain carriers and industrial corporations. The ownership of industrial corporations by carriers and of carrier corporations by industrials is frequently taken advantage of to defeat that equality between shippers which the act contemplates. This is accomplished by unreasonable divisions of joint rates forced upon the carrier by powerful shippers who control industrial railroads. Such arrangements may be legal in form, although certainly illegal in effect. We find that a certain number of large industrial concerns control tracks and terminal facilities nominally owned by small railroad corporations which do not rise to the dignity of common carriers, but which are treated as such by the connecting carriers. As a result, the connecting carriers make a switching allowance or a division of the joint rate to such terminal lines, which practice unquestionably results in discrimination and places the industrial at an advantage in the market. Another form of discrimination is found in the leasing of property by carriers to shippers for a nominal consideration, with a further agreement that all shipments made by the lessee shall be routed over the lines of the lessor.
>
> It becomes increasingly evident that entire freedom from discrimination can be secured only by a complete separation of the business of transportation from every form of commercial or industrial enterprise.

Mr. BARTLETT. Right there. Congress, in 1906, I believe, undertook to take care of that by providing an amendment to the interstate commerce act, what was known as the commodities clause, I believe. The Supreme Court passed on it, although not very definitely. It went back for retrial. It has been retried, and is now pending in the Supreme Court again.

Mr. FREER. I did not know it is pending in the Supreme Court. I knew it was passed back for retrial.

Mr. BARTLETT. As I understood, it is pending in the Supreme Court of the United States.

Mr. REED. That is the Lehigh Valley case?

Mr. BARTLETT. I do not know the name of that.

Mr. FREER. Of course, that is the other end of the proposition. That is where you attempt to prohibit the carrier, but you fail to cover the converse situation.

Mr. Bartlett. Yes, sir; that is what we are trying to do—to find out what to do about it.

Mr. Gardner. I will ask you to explain the case in point, the Lehigh Valley case. I am not a lawyer, and I would like to have that explanation.

Mr. Freer. I am not a lawyer, and I would not like to attempt to explain it.

Mr. Gardner. Perhaps Mr. Reed will make a short statement.

Mr. Reed. I am not familiar enough with the facts.

Mr. Sterling. Was the constitutionality of that law in question in that case?

Mr. Reed. I understand that was considered to have been settled in the prior case.

Mr. Bartlett. I do not think that prior case settled anything.

Mr. Gardner. Perhaps Mr. Bartlett might help me to follow this discussion.

Mr. Bartlett. It was discussed in the Senate and by lawyers in the House. It is believed that nothing was settled in that case, except that Congress has not gone beyond its constitutional powers, if the court construed the intention of Congress to mean what it did, and that decision—I do not say it with any disrespect—was very hazy indeed. It is now up again for argument, to determine whether Congress can effectually prohibit the railroads from owning coal or things of that sort, and dealing in it and transporting it over the roads at different rates than charged to other people engaged in like business.

Mr. Gardner. Why it it called the commodities clause?

Mr. Bartlett. Because it provided that no railroad should, after a certain time—it was the Elkins amendment to the act of 1906 which provided that railroads engaged in interstate commerce should not also engage in the production and sale and manufacture of commodities to be hauled over its own lines. It undertook to separate railroads from engaging in the business of mining coal——

Mr. Gardner. Irrespective of whether those materials were to be used on its own line or not?

Mr. Bartlett. No.

The Chairman. No mention of that was made.

Mr. Bartlett. That was not the law, but when it undertook to engage in the business of selling coal to the public, which was to be transported over its own line, in competition with other people who did not have that advantage——

Mr. Gardner. When was that case tried?

Mr. Bartlett. The case that was tried was the Reading Railway case. Mr. Reed thought it was the Lehigh Valley case. I think it was the Reading. The case, as I understand it, went back and was retried and is now awaiting final decision by the Supreme Court. It has been argued and reargued, so that we do not know what the law is; at least I do not know. There are some amendments offered to the act of 1910 and a number of bills introduced along that line. I was on the Interstate Commerce Committee of the House in 1910, when we reported this amendment to the Interstate Commerce act out. Mr. Wanger of Pennsylvania offered quite an elaborate amendment in an endeavor to meet some of the suggestions of the Supreme Court, and it was voted down in the committee and not reported, because of the fact that the case was still in the courts. I think Mr. Wanger offered the same amendment on the floor of the House, and Mr. Mann, the chairman of the Interstate Commerce Committee, as well as the minority members, called attention to the fact that the decision was in such an unsettled condition that before enacting further legislation upon it we had better await the case which was before the courts at that time.

Mr. GARDNER. When will that be decided?

Mr. BARTLETT. It has been reargued and it ought to be handed down some time during the present session of the court.

The CHAIRMAN. Mr. Freer, I will get you to cite the committee to any roads that are subsidiaries of the Steel Corporation, which in their operations perform the functions of a plant facility and enjoy the powers and privileges of common carriers in a broader sense.

Mr. REED. Ought it not to appear first that the witness has made some examination of these roads?

The CHAIRMAN. If you have.

Mr. FREER. The only examination I have made is of these tonnage reports which the railroads themselves have filed here.

Mr. YOUNG. Can not the witness define what he means by a plant facility? There is a good deal of confusion about what a plant facility really is.

Mr. FREER. A railroad that I would consider as a plant facility is a railroad that is built and maintained primarily for the economical operation of the plant which built it, and whose outside business is merely incidental to a small amount.

Mr. YOUNG. How small?

Mr. FREER. That is where I——

Mr. YOUNG (interposing). That is where they all get into trouble.

Mr. GARDNER. After all, is it not a question of convenience entirely? None of these alleged plant facilities that have been cited are exclusively engaged in the business of their plants. They all accept common-carrier business naturally. Is not that a case where the question of what is and what is not a plant facility is to be decided by the Interstate Commerce Commission, or the courts, on each case as it arises, because to the extent they supply themselves they are plant facilities, and to the extent they supply the public they are common carriers; and you can not say a thing is either a plant facility or a common carrier when it performs both functions. You can say it is principally a plant facility or principally a common carrier, but it seems to me that you can not give any absolute definition of a plant facility unless you say such and such is an exclusive plant facility, another class of railroad is practically a plant facility, and a third class of railroad is substantially a plant facility.

Mr. FREER. Another difficulty, of course, Mr. Gardner, would be that you might determine it was a plant facility to-day and next year it would be an entirely different proposition.

The CHAIRMAN. As I understand it, there is a distinct difference between a common carrier and a plant facility, where the common carrier performs its normal functions and where the plant facility is used exclusively for the convenience of the industrial concern holding it.

Mr. FREER. There would be a difference.

The CHAIRMAN. These two distinct things are separated by twilight zones, and you only get into trouble in drawing these nice distinctions between the two; it is only when you begin to say where one begins and the other begins, that you have trouble.

Mr. FREER. I think that is correct.

The CHAIRMAN. I will ask you to give the committee the tonnages of some of the roads of the United States Steel Corporation which partake of the nature of a common carrier and a plant facility.

Mr. GARDNER. That is a very correct way of putting the question; that is exactly the way to put it.

The CHAIRMAN. I am deeply grateful, Mr. Gardner, to hear your expression that you agree with me this one time.

Mr. FREER. Here is one sheet of figures relating to the Lake Terminal Railroad, which operates at Lorain, Ohio.

Mr. YOUNG. Owned by whom?

Mr. FREER. It is a subsidiary of the United States Steel Corporation.

Mr. YOUNG. Will you please state the source of those figures?

Mr. FREER. The chairman will have to state that.

The CHAIRMAN. Those are figures furnished by the United States Steel Corporation, or by the Interstate Commerce Commission. They are all furnished either by the Interstate Commerce Commission or by the Steel Corporation.

Mr. REED. These particular figures were furnished by the company itself.

Mr. YOUNG. You mean by "the company," the Steel Corporation?

Mr. REED. They were furnished by the different railroads that are mentioned.

Mr. YOUNG. Those are Steel Corporation subsidiaries?

Mr. REED. Yes, sir.

The sheet referred to is in the words and figures following, to wit:

The Lake Terminal Railroad Co. classified statement of tonnage handled July 1, 1909, to June 30, 1910.

United States Steel Corporation:		
Raw materials—		
Outbound	1,898,775	
Inbound	1,735,106	
Local	1,363,220	
		4,997,101
Semifinished and finished materials—		
Outbound	523,385	
Inbound	81,929	
Local	1,804,776	
		2,410,089
Corporation total		7,407,190
Other business:		
Inter-line	4,666	
Local	7,004	
		11,670
Grand total		7,418,860

Mr. FREER. On this particular railroad, the Lake Terminal Railroad at Lorain, according to this statement of tonnage furnished for the year ended June 30, 1910, 98.4 per cent of the total tonnage handled by that railroad was United States Steel Corporation tonnage, and

99.8 per cent of its total inter-line business was Steel Corporation tonnage; that is, the business which it handled to or from other railroads. The first was the total business, including business which originated and ended right on that railroad.

Mr. YOUNG. Does it do any passenger business at all?

Mr. FREER. I understand not; no, sir.

Mr. GARDNER. Does it get a division of rates on through business?

Mr. FREER. Yes, sir; it gets an arbitrary division.

Mr. BARTLETT. What is the per cent of the division on through business?

Mr. FREER. I think it is 10 cents on what are called the raw materials, and 15 cents on the finished products; that is, per ton. I am not certain of that.

Mr. GARDNER. That is outside of the switching charge, that 10 cents.

Mr. FREER. That includes switching. If another railroad would deliver them a car going into one of these plants, of raw material like limestone, they would allow the Lake Terminal Railroad 10 cents a ton for handling the car from the point of connection to the place of delivery.

Mr. GARDNER. What I wanted to get at was the net amount of advantage in having a division of rates. Presumably if they had no division of rates there would be a switching charge.

Mr. FREER. If they had no division of rates you say there would be a switching charge?

Mr. GARDNER. Yes; would there not? I mean to say if the tracks of the Lake Terminal Co. were within the plant of the United States Steel Corporation there would be some charge for handling the cars, for switching them; would there not?

Mr. FREER. I would understand not; no, sir. They would be simply performing their own business for themselves. I do not understand they would make a charge if they were not getting some allowance from the other railroads.

Mr. GARDNER. It would depend on where the freight was delivered.

Mr. YOUNG. If they did not perform this service, if the receiving industrial company did not perform this service, when serving a different plant, that would have to be done by the railroad company, and they would have to build those tracks.

Mr. FREER. The railroad would have to perform part of this service, at least, which is now being performed by the Lake Terminal Road. The railroad would at least have to deliver the car to the plant. It might not do all the switching inside of the plant.

Mr. GARDNER. How much in excess of what a reasonable charge would be for switching service—what we will call the delivery at the plants—is this division of rates, of 10 and 15 cents?

Mr. FREER. I would not attempt to say, Mr. Gardner.

Mr. GARDNER. I wanted to get into my mind how much of an advantage that gave them which their competitors would not have, if they had no little connecting railroad.

Mr. FREER. The Interstate Commerce Commission is now wrestling with that subject. It is quite a serious question, I think, both for the commission to settle, and I think the railroads are very anxious to get it determined.

The CHAIRMAN. Right at that point, it has been decided, in these milling in transit cases—this very same question, has it not?

Mr. FREER. Not in the milling in transit cases, as I understand it. They decided some time ago the case of the Manufacturers' Railway at St. Louis.

The CHAIRMAN. That is the Budweiser case?

Mr. FREER. That was the Anheuser-Busch Brewing Co.'s railroad. There the majority of the commission decided there was nothing improper in an allowance to the manufacturers' railway, and they set the case down for further hearing to determine the amount of allowance. There was a minority opinion which held it was not proper to make an allowance; so that the commission itself I think has not been unanimous in its views as to what shall be done with these terminal railroads.

Mr. BARTLETT. Will you give me the tonnage each of the 10 cents per ton and the 15 cents per ton division, the amount of tonnage on those divisions?

Mr. FREER. The total tonnage handled by the railroad was 7,418,860 gross tons.

Mr. BARTLETT. Does it give a division between the 10-cent and 15-cent allowance?

Mr. FREER. Yes, sir.

Mr. REED. While Mr. Freer is figuring that out, I might mention that about three or four months ago the Interstate Commerce Commission had a case very much like this in the Buffalo Union Furnace Co., in South Buffalo. In that case they decided that that company's railroad was a bona fide railroad and entitled to a switching allowance. Then after the decision had come down, a week or so later, the commission rescinded or recalled its decision, and it has not reissued it. So that there is a good deal of uncertainty in everybody's mind as to just what its attitude is going to be on that question.

The CHAIRMAN. In that case I believe the decision was changed not because the former holding was not abstractly right, but because other railroads were engaged in the same practices.

Mr. REED. I think that was the substance of it, that there was a discrimination against the Buffalo Union Furnace Co., and then they recalled that decision pending the decision of the broader question which they are now investigating, the whole terminal-railroad situation.

The CHAIRMAN. I understand the Interstate Commerce Commission has held that no allowance ought to be made for the performance of a service by an industrial for its own benefit in the tendering of freight to a common carrier or receiving it from it. It has also held that they were entitled to the cost of the service, and it has also held they were entitled to the cost of the service plus a reasonable per cent on the amount invested.

Mr. REED. And the Supreme Court has not helped it any in the Peevy Elevator case.

The CHAIRMAN. That is correct, Mr. Reed; it has been held the three ways?

Mr. REED. I do not know what the law is.

Mr. BARTLETT. Here is the decision in the Buffalo Union Furnace case.

Mr. YOUNG. That is the one they drew back.

Mr. REED. The one that they suspended.

Mr. FREER. I have these figures now.

Mr. BARTLETT. I wanted to know what was the tonnage first on the 10-cent division of the rate and then on the 15-cent division.

Mr. FREER. The raw material was 3,633,876 tons, which at the division of 10 cents a ton would be $363,387.

Mr. BARTLETT. Now, on the 15-cent division.

Mr. FREER. Six hundred and ten thousand tons, in round numbers, at 15 cents a ton, would be $91,500.

The CHAIRMAN. What is your total?

Mr. FREER. Practically $455,000. That is only the interline tonnage. In addition to that there were practically 3,000,000 tons of local tonnage which originated and ended on that railroad.

Mr. YOUNG. That was its own?

Mr. FREER. That was its own material which it handled from the point of origin to destination, and in which no other railroad participated.

The CHAIRMAN. At that point, Mr. Freer, I will ask you to insert in the record the report of the Interstate Commerce Commission in regard to the Lake Terminal Railroad Co., this railroad under discussion, at Lorain.

The statement referred to is in the words and figures following, to wit:

Statement compiled from annual reports of the Lake Terminal Railroad Co.[1] *to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.*[2]

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$2,000,000	$2,000,000	$2,000,000	$2,000,000
Main-track mileage owned at end of year	10.75	10.59	12.68	5.84
Yard track and sidings mileage owned at end of year	22.18	19.14	16.98	
Total main-track mileage operated at end of year	10.75	10.59	12.68	5.84
Total operating revenues	$513,508.42	$568,108.54	$338,060.65	$222,756.72
Total operating expenses	$421,106.35	$384,397.03	$255,341.79	$241,461.17
Total net revenue	$92,402.07	$183,711.51	$82,718.86	[3] $18,704.45
Net corporate income	$107,426.04	$189,362.07	$65,403.93	[3] $15,530.16
Balance for year carried forward to credit of profit and loss	$107,426.04	$189,362.07	$65,403.93	[3] $15,530.16
TRAFFIC AND CAR STATISTICS.				
Car statistics:				
Switching traffic, freight—				
1. Cars handled earning revenue—loaded	158,936	199,581	236,248	198,432
2. Cars handled earning revenue—empty				1,907
4. Cars handled not earning revenue—loaded		6,127		
5. Cars handled not earning revenue—empty	183,623			
6. Total cars handled	342,559	205,708	236,248	200,339
Summary—				
19. Total cars handled earning revenue—loaded	158,936	199,581	236,248	198,432
20. Total cars handled earning revenue—empty				1,907
21. Total cars handled not earning revenue—loaded		6,127		
22. Total cars handled not earning revenue—empty	183,623			
24. Total number of cars handled	342,559	205,708	236,248	200,339
Revenue and expense statistics:				
Switching traffic and terminal operations—				
25. Switching revenue	$513,508.42	$567,749.96	$338,060.65	$222,756.72
26. Other revenue		$358.58		
27. Total revenue	$513,508.42	$568,108.54	$338,060.65	$222,756.72
28. Average revenue per car handled	$1.499	$2.760	$1.431	$1.112
31. Operating expenses	$421,106.35	$384,397.03	$255,341.79	$241,461.17
32. Average expenses per car handled	$1.229	$1.868	$1.081	$1.205

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[1] The annual reports of this company for the year 1908 and for subsequent years indicate that it was controlled by the Federal Steel Co.; this information was not given or called for in reports for prior years. The annual reports do not indicate that the Lake Terminal Railroad Co. controlled any other transportation companies. The annual reports for 1909 to 1905 indicate that the Lake Terminal Railroad Co. operated yard tracks and sidings of the National Tube Co., under lease; while the annual reports for 1911 and 1910 indicate that it operated such tracks and sidings under trackage rights. The annual reports for 1903 and 1902 indicate that the Lake Terminal Railroad Co. was operated in those years, under lease, by the Lorain Steel Co.; while the annual report for 1904 indicates that it was operated by the National Tube Co., the successor of the Lorain Steel Co.

[2] For some items the figures shown for 1908 and for subsequent years are not fully comparable with those shown for 1907 and prior years, because of changes in classifications and report forms.

[3] Represents deficit.

Statement compiled from annual reports of the Lake Terminal Railroad Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000
Single-track mileage owned at end of year—main line	6.31	5.81	2.00	2.00	2.00	2.00
Single-track mileage owned at end of year—branches and spurs			9.66	9.66	9.66	9.66
Total single-track mileage operated at end of year	6.31	5.81	11.66	11.66	11.66	11.66
Total gross earnings from operation	$402,858.71	$399,259.44	$243,623.20	$7,880.12	$23,285.79	$25,256.17
Total operating expenses	$308,323.06	$264,879.92	$224,234.84	$129,519.42	$108,656.67	$105,743.24
Income from operation	$94,535.65	$134,379.52	$19,388.36	[1] $121,639.30	[1] $85,370.88	[1] $80,487.07
Net income	$77,638.44	$103,985.29	[1] $1,905.47	[1] $145,330.47	[1] $91,561.07	[1] $80,573.83
Surplus from operations of year	$77,638.44	$103,985.29	[1] $1,905.47	[1] $145,330.47	[1] $91,561.07	[1] $80,573.83
TRAFFIC AND MILEAGE STATISTICS.[2]						
Freight traffic:						
15. Total freight revenue	$349,461.19	$390,689.76	$239,389.24			
18. Total freight earnings	$349,461.19	$390,689.76	$239,389.24			
19. Freight earnings per mile of road	$55,382.12	$67,244.36	$20,530.81			
Total traffic:						
21. Gross earnings from operation	$402,858.71	$399,259.44	$243,623.20	$7,880.12	$23,285.79	$25,256.17
22. Gross earnings from operation per mile of road	$63,844.48	$68,719.35	$20,893.93	$675.82	$1,997.07	$2,166.05
24. Operating expenses	$308,323.06	$264,879.92	$224,234.84	$129,519.42	$108,656.67	$105,743.24
25. Operating expenses per mile of road	$48,862.00	$45,590.54	$19,231.12	$11,108.01	$9,318.75	$9,068.89
27. Income from operation	$94,535.65	$134,379.52	$19,388.36	[1] 121,639.30	[1] $85,370.88	[1] $80,487.07
28. Income from operation per mile of road	$14,981.87	$23,129.01	$1,662.81	[1] $10,432.19	[1] $7,321.69	[1] $6,902.84
Car mileage, etc.:						
41. Average mileage operated during year	6.31	5.81	11.66	11.66	11.66	11.66

No statement showing freight traffic movement is submitted for this company, for the reason that the special forms for the annual reports of switching and terminal companies for the years 1911 to 1908 did not call for much information; and none was furnished in the annual reports filed by the company for the years 1907 to 1902 because of the character of its business.

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[1] Represents deficit.

[2] Omission of data for certain items under "Traffic and mileage statistics" explained by reason of the fact that "this company does only a switching business, carries no passengers, and consequently can give no figures for 'Passenger traffic,' 'Freight traffic,' and 'Train mileage.'"

Mr. FREER. Do you wish me to proceed with some of the others?

The CHAIRMAN. Yes. Take the Newburgh & South Shore Railway Co.

Mr. FREER. The Newburgh & South Shore——

Mr. YOUNG. Where is that located?

Mr. FREER. That is located at Cleveland, Ohio. They furnish a statement of business handled for the year ended July 1, 1910, but it is in different form. Their statement shows the number of cars handled and not the number of tons. Taking the number of cars handled for the Steel Corporation and the number handled for outside interests, the Steel Corporation business was 96.9 per cent of the total number of cars handled by that railroad, and the Steel Corporation's business was 93.8 per cent of the total interline tonnage handled by that railroad. That latter is the tonnage received from or delivered to other railroads.

Mr. REED. A good deal of that is hauled some 20 or 25 miles back from the lake, is it not?

Mr. FREER. Yes; I should think it would be 20 or 25 miles from Newburgh to the connection with the other railroad.

The statement referred to is in the words and figures following, to wit:

Statement compiled from annual reports of Newburgh & South Shore Railway Co.[1] to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.[2]

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$1,500,000	$1,500,000	$1,500,000	$1,500,000
Main-track mileage owned at end of year	8.61	8.61	8.61	7.45
Yard-track and sidings mileage owned at end of year	21.97	21.97	15.20	15.20
Total main-track mileage operated at end of year	13.14	13.14	13.14	11.98
Total operating revenues	$505,466.99	$565,867.07	$502,569.20	$330,795.78
Total operating expenses	$409,539.02	$428,310.73	$365,446.91	$397,875.01
Total net revenue	$95,927.97	$127,556.34	$137,122.29	[3] $67,079.23
Net corporate income	$81,227.21	$129,533.64	$147,660.39	[3] $35,716.32
Other disbursements from net corporate income			$5,510.48	$5,900.52
Balance for year carried forward to credit of profit and loss	$81,227.21	$129,539.64	$142,149.91	[3] $41,616.84
TRAFFIC AND CAR STATISTICS.[4]				
Car statistics:				
Switching traffic, freight—				
1. Cars handled earning revenue, loaded	99,773	155,617	94,887	
5. Cars handled not earning revenue, empty	152,826	84,972	95,366	
6. Total number of cars handled	252,599	240,589	190,253	
Switching traffic, passenger—				
7. Number of cars handled earning revenue, loaded	6,260	6,260	1,404	
Terminal operations, freight—				
13. Number of cars handled earning revenue	53,625	64,738	58,896	
Summary—				
19. Total number of cars handled earning revenue, loaded	159,658	226,615	155,187	
22. Total number of cars handled not earning revenue, empty	152,826	84,972	95,366	
24. Total number of cars handled	312,484	311,587	250,553	
Revenue and expense statistics:				
Switching traffic and terminal operations—				
25. Switching revenue	$488,084.03	$557,728.13	$500,390.03	
26 Other revenue	$17,382.96	$8,138.94	$2,179.17	
27. Total revenue	$505,466.99	$565,867.07	$502,569.20	
28. Average revenue per car handled	$1.560	$1.790	$2.004	
31. Operating expenses	$409,539.02	$428,310.73	$365,446.91	
32. Average expenses per car handled	$1.311	$1.375	$1.458	

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$1,500,000	$1,350,000	$1,275,000	$1,195,000	$750,000	$25,000
Single-track mileage owned at end of year—main line	7.45	5.00	5.00	5.00		
Total single-track mileage operated at end of year	11.98	9.53	9.53	9.53	4.53	4.53
Total gross earnings from operation	$468,188.63	$382,672.05	$245,686.50	$193,755.70	$261,112.57	$243,447.00
Total operating expenses	$303,997.89	$294,981.62	$195,152.00	154,116.84	185,292.73	151,174.49
Income from operation	$164,190.74	$87,690.43	$50,534.50	$39,638.86	$75,819.84	$92,272.51
Net income	$150,095.13	$65,196.97	$22,508.92	$13,769.15	$25,357.67	$41,862.01
Dividends		$67,500.00			$40,000.00	$50,000.00
Surplus from operations of year	$150,095.13	[3] $2,303.03	$22,508.92	[3] $13,769.15	[3] $14,642.33	[3] $8,137.99
Rate per cent of dividend		5			5⅓	200
TRAFFIC AND MILEAGE STATISTICS.[5]						
Freight traffic:						
15. Total freight revenue	$465,531.25	$377,370.27	$245,621.50	$193,755.70	$261,112.57	$205,060.00
18. Total freight earnings	$465,531.25	$377,370.27	$245,621.50	$193,755.70	$261,112.57	$205,060.00
19. Freight earnings per mile of road	$44,336.31	$39,598.14	$25,773.50	$39,142.57	$57,640.74	$45,267.11
Total traffic:						
21. Gross earnings from operation	$468,188.63	$382,672.05	$245,686.50	$193,755.70	$261,112.57	$243,447.00
22. Gross earnings from operation per mile of road	$44,589.39	$40,154.46	$25,780.32	$39,142.57	$57,640.74	$53,741.06
24. Operating expenses	$303,997.89	$294,981.62	$195,152.00	$154,116.84	$185,292.73	$151,174.49
25. Operating expenses per mile of road	$28,952.18	$30,952.95	$20,477.65	$31,134.72	$40,903.47	$33,371.85
27. Income from operation	$164,190.74	$87,690.43	$50,534.50	$39,638.86	$75,819.84	$92,272.51
28. Income from operation per mile of road	$15,637.21	$9,201.51	$5,302.67	$8,007.85	$16,737.27	$20,369.21
Car mileage, etc.:						
41. Average mileage operated during year	10.50	9.53	9.53	4.95	4.53	4.53

No statement showing freight traffic movement is submitted for this company, for the reason that the special forms for the annual reports of switching and terminal companies for the years 1911 to 1908 did not call for such information; and none was furnished in the annual reports filed by the company for the years 1907 to 1902 because of the character of its business.

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[1] The annual reports of this company for the year 1908 and for subsequent years indicate that the majority of the stock of this company was held by individuals in the interest of the American Steel & Wire Co.; this information was not given or called for in reports for prior years. The annual reports do not indicate that the Newburgh and South Shore Railway Co. controlled any other transportation companies. The annual reports for all years under consideration indicate that the Newburgh & South Shore Railway Co. operated mileage of the American Steel & Wire Co,

[2] For some items the figures shown for 1908 and for subsequent years are not fully comparable with those shown for 1907 and for prior years, because of changes in classification and report forms.

[3] Represents deficit.

[4] These data not furnished for 1908.

[5] Omission of data for certain items under "Traffic and mileage statistics" explained by reason of this company being a switching company only.

THE NEWBURGH & SOUTH SHORE RAILWAY CO.,
OFFICE OF GENERAL SUPERINTENDENT.

Statement of carloads handled, July 1, 1909, to July 1, 1910.

	Cars.
United States Steel Corporation:	
Local, raw material	108,977
Interline, raw and finished	65,701
Total	174,678
Other business:	
Local	1,100
Interline	4,246
	5,346
Total	180,024

Mr. GARDNER. Mr. Freer, can all these things be arranged so as to be just and not give the Steel Corporation an advantage over their competitors through the Interstate Commerce Commission, without forbidding the Steel Corporation to own their own railroads, in your opinion? Assuming that the law was fixed in proper form so as to give complete power to the Interstate Commerce Commission, or other courts, would it be possible to eliminate this advantage, if there is one, and it seems as if there were?

Mr. FREER. I hardly feel qualified to answer, and yet I do not object to saying that in my opinion it will not be possible unless they are separated.

Mr. GARDNER. Is that because you think it will be impossible to enforce the law equitably, or what is your reason for thinking they should be separated?

Mr. FREER. I think it will be very difficult to avoid some advantage, as long as they control the railroad business.

Mr. GARDNER. I mean an advantage other than they are entitled to, the same as I used in the illustration yesterday in connection with a Washington livery stable that produced its own hay.

Mr. FREER. When you come down to that point, I don't know but what that could be regulated.

Mr. BARTLETT. I did not catch that last word.

Mr. FREER. I say when you come down to the point of eliminating the broad question of advantage, and coming to what I said yesterday was an unfair advantage, or some such term as that, I do not know but what that phase of it could be regulated.

Mr. GARDNER. I think there is certainly a distinction to be drawn. I am not prepared to say that I can draw the distinction without further thought, but I think there should be a distinction drawn between a railroad which is owned by an industrial, and a situation where by devices in the division of rates they can turn their partial plant facilities into common carriers for the purpose of getting division. I think that latter form is clearly something to be prohibited if possible. But what I wished to get at was whether that could not be prohibited without going to the extreme of forbidding them to enter into the business of transportation.

Mr. REED. May I suggest, Mr. Gardner, that that was pretty well covered in the latest draft of the interstate-commerce act? The provision is not very long, and if I may, I will read it to you at this point.

Mr. Gardner. I should like to hear it.

Mr. Reed. The act provides, in section 15, paragraph 8:

> If the owner of property transported under this act directly or indirectly renders any service connected with such transportation, or funishes any instrumentality used therein, the charge and allowance therefor shall be no more than is just and reasonable, and the commission may, after hearing on a complaint or on its own initiative, determine what is a reasonable charge as the maximum to be paid by the carrier or carriers for the service so rendered or for the use of the instrumentality so furnished, and fix the same by appropriate order, which order shall have the same force and effect and be enforced in like manner as the orders above provided for under this section.

So it is largely a question of the application of an adequate law to a rather confused state of facts.

Mr. Gardner. Of course that law has not been on the statute books long enough to have all these individual facts worked out, beyond the general principle of its application.

Mr. Reed. Of course not.

Mr. Bartlett. Does that provision of the act meet the situation in your mind, Mr. Freer?

Mr. Freer. As I said before, I do not like to express an opinion——

Mr. Bartlett. I am just asking for your opinion.

Mr. Freer. My own opinion has been in line with that which I read from the report of the Interstate Commerce Commission, that complete segregation of these railroads would finally be necessary in order to control that situation.

The Chairman. Right at that point, if the industrial is a shipper of an enormous tonnage, and is also a common carrier, controlling large shipments and controlling immense mileage, is not that industrial in a position if it so chooses to command advantages?

Mr. Freer. I think so.

Mr. Young. Notwithstanding the Interstate Commerce Commission's power over the situation?

Mr. Freer. Well, the Interstate Commerce Commission might in time catch up with all of those things and correct them.

Mr. Young. Another thing right there——

The Chairman. Right at that point, not to interrupt you, Mr. Young, does not the Interstate Commerce Commission in its latest report admit its inability to handle the situation?

Mr. Young. I do not think that is very conclusive. They apparently do.

But right there, suppose we do this; suppose we eliminate these roads. Do you think that the railroad company would ever meet the needs of the plant in doing the switching about from place to place, doing the work that the manufacturers would want, would need, in order to be efficient, in the way that that company could do it itself?

Mr. Freer. I have had an idea, Mr. Young, that the railroads to-day are up against this terminal proposition. They would like to have something done, but I have always had the idea that they were themselves to a large extent responsible for it. You take the situation at Pittsburgh. The Pennsylvania Railroad and the Baltimore & Ohio, for instance, will not switch for each other. Now, a large plant that is going to do the business of the Carnegie Steel Co., for instance, did not feel it could be tied down to one railroad; and I have always been rather inclined to think if the railroad had been a little more liberal that some of these terminal propositions would never have been started.

Mr. Young. Even if they were liberal, do you think that unless this railroad which is a plant facility, although it may be something else, was under the control of an entirely separate corporation, that it could ever work harmoniously with the manufacturer so as to do the work as well as the manufacturer can do it for himself?

Mr. Freer. No. A large plant would still have to have its interplant tracks and facilities and do its own interplant work.

Mr. Young. Is it not almost impracticable to separate the purely plant work from that which is of a certain amount of service to the railroads?

Mr. Freer. I do not think it would be impossible if its tracks were confined to its own property.

The Chairman. In other words, a large concern can own its own tracks and its own locomotives, either inside of its plant or around its plant, just as it owns other means of trucking and the like of that for transporting its material, without placing them on the footing either of what we now call a plant facility or of a common carrier, without incorporating them as a separate concern.

Mr. Freer. That would simply be a case of internal economy, whether it was more economical for them to handle their business in their plant by their own locomotives or to handle it some other way.

I think that phase of the case was before the Interstate Commerce Commission in what was known as the Crane case, where they held the plant was not entitled to anything because it was simply doing work within the plant.

The Chairman. I wish you would take up the General Electric case.

Mr. Freer. I have not that here.

The Chairman. Take that as a good illustration.

Mr. Freer. I think the same question was in both the Crane and the General Electric cases, where the commission decided that the work which the plant was performing was simply interplant service. The railroad had delivered the car to the designated point of delivery and the plant for its own convenience handled it around to the different parts of its plant.

Mr. Gardner. In that particular case the evil was remedied?

Mr. Freer. They refused to make any allowance.

Mr. Gardner. In that case what you think is an unfair advantage—and I do not deny it—has been remedied, has it?

Mr. Freer. It was remedied; yes, sir. I think one of those cases is now in the courts, the Crane case, although I am not certain about that. But it was remedied.

Mr. Gardner. It seems to me that the true remedy may lie in the direction of refusing to allow a division of rates on all business which is plant business, and permit a division of rates on such of their business as is not plant business. Would that be a possible solution?

Mr. Freer. Do you mean eliminate entirely the business of the company controlling the railroad?

Mr. Gardner. Suppose 98 per cent of it is plant business. You have instanced a case where it was. By forbidding a division of rates and only allowing what are called switching charges on that 98 per cent of business, and permitting it on the other 2 per cent of business, would not that be a possible thing?

Mr. **Freer.** I think possibly that could be worked out. I think that is one solution that has been suggested in this investigation that is now going on by the Interstate Commerce Commission.

Mr. **Gardner.** That has been suggested?

Mr. **Freer.** There has been a suggestion that the service of placing the car to some designated point of delivery be separated from the internal service, and that some allowance be made for the first, and that the plant itself must stand the balance of it.

Mr. **Gardner.** For instance, if the Pittsburgh, Bessemer & Lake Erie, or whatever the name under which it operates, were to be owned by another corporation other than the United States Steel Corporation, I presume it would be impossible for the United States Steel Corporation to conduct its business—I am not speaking of the profits of the business—to conduct its business with the promptness and with the adequacy that it can, so long as that railroad is in its possession.

Mr. **Freer.** I do not think so. That might be the case with the Union Railroad, which is the terminal road. But I do not think it would make any difference with the Bessemer & Lake Erie Road.

Mr. **Gardner.** I had supposed that the interrelation between the docks and the factories, the furnaces, could all be worked out a great deal better if they could count on cars going in this direction on one time and cars going in another direction at another time, if it was all under one heading. It would be in the direction of economy of production.

Mr. **Freer.** My personal opinion is that the Bessemer & Lake Erie would use exactly the same effort to handle the business as it has if it were owned by entirely separate interests.

Mr. **Gardner.** The gentleman on your left is, I think, the general freight agent of the Bessemer & Lake Erie.

Mr. **Reed.** Mr. F. C. Baird.

Mr. **Baird.** Yes, sir.

Mr. **Gardner.** If the committee will excuse me, I would like to ask Mr. Baird's opinion on that.

Mr. **Baird.** What is that?

Mr. **Gardner.** I say I would like to ask your opinion as to whether the plants of the United States Steel Corporation at Pittsburgh could be so adequately served by the Bessemer & Lake Erie if it was independent, as they can be with it dependent?

Mr. **Baird.** I would answer that in this way, that the efforts of the railroad management would be directed to afford the same efficiency that they do to-day, but that they would be handicapped in doing that in not having the full knowledge of the complete operation of the combined institutions that they have to-day.

The **Chairman.** You furnish the same facilities, the same speed in shipments to other consignees that you do to the Steel Corporation, do you not?

Mr. **Baird.** Absolutely; yes, sir.

The **Chairman.** If you do that what would be the difference between being a subsidiary of the Steel Corporation and running on your own hook?

Mr. **Baird.** The other institutions served are not of the same magnitude, and the requirements are corresponding to the magnitude of the business they do.

The CHAIRMAN. Those institutions would still be there, would they not?

Mr. BAIRD. Yes.

The CHAIRMAN. Their magnitude would not be lessened by your ceasing to be a subsidiary of the Steel Corporation?

Mr. BAIRD. Not at all.

The CHAIRMAN. You would have the same amount of freight to deliver, would you not?

Mr. BAIRD. We would hope to have.

The CHAIRMAN. And you would deliver it in the same way?

Mr. BAIRD. With the same facilities.

The CHAIRMAN. What advantage do you receive by virtue of being a subsidiary of the United States Steel Corporation?

Mr. BAIRD. We do not receive any advantage.

The CHAIRMAN. What advantage does the public receive?

Mr. BAIRD. The public all along its road is served by the best railroad facilities that there are in the United States.

The CHAIRMAN. Would you not still be the best railroad in the United States if you were independent?

Mr. BAIRD. We would hope to feel that way about it.

The CHAIRMAN. It would not make any difference in your roadbed, your rails, the capacity and tonnage of your cars, the speed of your engines—it would not affect them, would it?

Mr. BAIRD. There would be some difference there, because no doubt as time went along, if the relationship was severed, they would not have the same volume of business they have to-day to keep their efficiency up to the place it has reached.

The CHAIRMAN. How is that; where would you lose?

Mr. BAIRD. Well, take limestone, for instance. There will be a large development along that line which will serve the persons that are located on the southern end.

The CHAIRMAN. Would not those persons need the same amount of limestone whether or not you are a subsidiary?

Mr. BAIRD. That is true, but there might not be the same encouragement to develop the quarries in this section of Pennsylvania.

The CHAIRMAN. I see. What is now carried by the Steel Corporation road, because it is a Steel Corporation road, would then be carried by the roads which are most adjacent to it and more convenient.

Mr. BAIRD. Oh, no. We are the most adjacent and conveniently located to a great portion of the limestone, as far as that is concerned.

The CHAIRMAN. Why would you lose that limestone by being an independent?

Mr. BAIRD. I say there might not be the same encouragement to other people to develop the quarries along that line. To-day they will develop because they can ship large quantities of limestone, and they would not do that unless they had the support of the Bessemer road in trying to make this limestone desirable to the persons served by that road.

Mr. GARDNER. Well, somebody else would, or another road; would they not?

Mr. BAIRD. That is true.

Mr. GARDNER. I think the chairman rather missed my point. I consider that any economy in production, in following the line of least resistence, is a benefit to the public sooner or later.

The CHAIRMAN. I quite agree with you; that is, if it goes to the public.

Mr. GARDNER. Well, sooner or later it is divided up, perhaps not fairly; but everybody gets their bite of the cheaper production.

The CHAIRMAN. If the beneficiary passes it on, they get it sooner, and if he appropriates it they get it later.

Mr. GARDNER. Whatever it is, I think that economy of production means a benefit to the public in the long run.

What I wanted to get at was whether there was any greater economy in production for the Steel Corporation because they owned the Bessemer & Lake Erie than there would be if they did not own it.

Mr. BAIRD. Unquestionably so. In the last 90 days the enormous manufacturing plants have been kept in operation simply by the presence and control of the Bessemer & Lake Erie Co. The other railroads are absolutely inadequate to the requirements to move the freight in and out and continue the operation of those mills.

The same condition prevailed in the years 1906 and 1907, and through the efforts of the railroad company, three mills continued to operate which otherwise would have been closed down.

Mr. GARDNER. Would not that be the same thing if somebody else owned the railroad?

Mr. REED. I think that is best illustrated by what did happen before the Steel Corporation got the Bessemer & Lake Erie Road. It was a very poor railroad in every sense. After it got it, and since it has had it, it has become a very efficient railroad—one of the best in the United States. It was on the verge of bankruptcy when it was in independent hands, and its service was not efficient.

Mr. GARDNER. That was in the hard times of the nineties, was it not? Still, I admit there is force in your argument.

The CHAIRMAN. At that point, what was the stock of the Bessemer & Lake Erie selling for at the time the Steel Corporation acquired it?

Mr. REED. It was very low; around 15 somewhere.

Mr. YOUNG. I would like to ask this question: Is there any advantage in the mutual operation of the steel plant at Pittsburgh and your road, having a coordinate management, from the fact there is a general management over both? Is there any advantage from the operation that way, in making it more efficient?

Mr. BAIRD. That management is not exercised in any way whatsoever. They are separate individual organizations, just the same as the Pennsylvania Railroad would be. But by conference to determine the possibilities of dock handling and the vessel movement through the docks, the requirements of the furnaces, the capacity of the terminal road, the Union Railroad, in handling, the whole movement is kept like a clock. Last year they handled the largest ore tonnage they have ever handled in the history of the organization, and there was not a break anywhere.

Mr. YOUNG. That is just what I am asking. That is what I meant by coordination.

Mr. BAIRD. There was not one vessel detained at Conneaut Harbor, there was no suspension of operation on the dock on account of lack of cars. The whole thing worked out systematically and like a piece of nicely adjusted machinery. For instance, a 2,000-ton ore train would go into North Bessemer, the northern terminus of this terminal railroad, probably every 30 minutes in the 24 hours, in and out. You can not conduct an operation of that character unless you have complete cooperation of all the elements entering into the full transportation of the business involved.

Mr. YOUNG. Don't you think you could have that operation if you were a separate organization, and separately owned?

Mr. BAIRD. No, sir; I do not. The efficiency of our mills and the furnaces would be immediately impaired.

Mr. REED. Take the matter of financing. When this Bessemer Road, the old Shenango Road, was independently owned, its credit being bad it could not get the necessary money to make the necessary repairs.

The CHAIRMAN. Well, Mr. Reed, the fact is that depends on its tonnage. That is, having this enormous tonnage, receiving these millions of tons of ore, shipping these millions of tons of finished product, would necessarily develop any road to which they would divert that tonnage, and if a road was in bad condition in those days it was because it did not get its share of the freight; is not that true?

Mr. REED. Not necessarily. It could not handle much more freight than it did, before it was rebuilt.

Mr. BAIRD. One of the modern ore trains could not pass over the old railroad; it would not carry it.

The CHAIRMAN. Mr. Freer, there are two statements which have not been inserted in your testimony, which I will ask you to insert at this point.

Mr. FREER. These are statements compiled from the annual reports to the Interstate Commerce Commission for the years ending June 30, 1902 to 1911, both inclusive, relative to the Union Railroad Co. and the Pittsburgh, Bessemer & Lake Erie Railroad Co.?

The statements referred to are in the words and figures following, to wit:

Statement compiled from annual reports of Union Railroad Co.[1] *to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.*[2]

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$2,000,000	$2,000,000	$2,000,000	$2,000,000
Funded debt outstanding at end of year	$4,350,000	$3,150,000	$3,150,000	$3,150,000
Main-track mileage owned at end of year	24.47	24.47	24.47	23.28
Yard track and sidings mileage owned at end of year	53.27	53.27	53.27	53.25
Total main-track mileage operated at end of year	56.35	55.75	55.05	53.86
Total operating revenues [3]	$3,801,510.98	$4,291,432.03	$2,999,889.55	$2,527,446.19
Total operating expenses [3]	$2,936,663.15	$2,624,677.14	$2,063,436.94	$2,141,380.55
Total net revenue [3]	$864,847.83	$1,666,754.89	$936,452.61	$386,065.64
Net corporate income	$385,396.77	$1,049,535.25	$67,622.26	[4] $173,061.16
Other disbursements from net corporate income	....	....	$327.67	$89,621.66
Balance for year carried forward to credit of profit and loss	$385,396.77	$1,049,535.25	$67,294.59	[4] $262,682.82
TRAFFIC AND CAR STATISTICS.[5]				
Car statistics:				
Switching traffic, freight—				
1. Number of cars handled earning revenue—loaded	939,050	1,092,697	885,550	....
5. Number of cars handled not earning revenue—empty	426,144	456,966	381,082	....
6. Total number of cars handled	1,365,194	1,549,663	1,266,632	....
Summary—				
19. Total number of cars handled earning revenue—loaded	939,050	1,092,697	885,550	....
22. Total number of cars handled not earning revenue—empty	426,144	456,966	381,082	....
24. Total number of cars handled	1,365,194	1,549,663	1,266,632	....
REVENUE AND EXPENSE STATISTICS.				
Switching traffic and terminal operations:				
25. Switching revenue	$3,621,930.74	$4,046,580.86	$2,872,977.15	....
26. Other revenue	$18,545.35	$9,866.32	$9,348.35	....
27. Total revenue	$3,640,476.09	$4,056,447.18	$2,882,325.50	....
28. Average revenue per car handled	$2.653	$2.611	$2.268	....
31. Operating expenses	$2,802,746.18	$2,445,951.08	$1,963,570.06	....
32. Average expenses per car handled	$2.053	$1.578	$1.550	....

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[1] The annual reports of this company for the year 1908 and for subsequent years indicate that it was controlled by the Carnegie Steel Co.; this information was not given or called for in reports for prior years. The annual reports for 1911 to 1908 indicate that the Union Railroad Co. controlled the Monongahela Southern Railroad Co.; information with respect to transportation companies controlled not given or called for in reports for years prior to 1908. The annual reports for 1911 to 1902 indicate that the Union Railroad Co. operated the Slackwater Connecting Railroad and certain mileage of the Pittsburgh, Bessemer & Lake Erie Railroad subleased from the Bessemer & Lake Erie Railroad; and, in addition, the Monongahela Southern Railroad from 1911 to 1906.

[2] For some items the figures shown for 1908 and for subsequent years are not fully comparable with those shown for 1907 and prior years, because of changes in classifications and report forms.

[3] Includes data for "Outside operations" which were not returned as separate items for years prior to 1908. The percentage of outside operations to rail operations was not over 8 per cent for any of the four years.

[4] Represents deficit.

[5] These data not furnished for 1908.

Statement compiled from annual reports of Union Railroad Co. to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$2,000,000.00	$2,000,000.00	$2,000,000.00	$2,000,000.00	$2,000,000.00	$2,000,000.00
Funded debt outstanding at end of year	$3,150,000.00	$3,150,000 00	$3,150,000.00	$3,150,000.00	$3,150,000.00	$2,000,000.00
Single-track mileage owned at end of year—main line	6.45	6.45	6.45	6.45	6.45	6.41
Single-track mileage owned at end of year—branches and spurs	8.43	8.43	8.43	7.56	7.56	10.34
Total single-track mileage operated at end of year	31.02	31.02	22.81	21.94	21.94	24.68
Total gross earnings from operation	$2,996,784.58	$2,823,318.30	$2,644,790.47	$1,929,084.68	$2,452,649.74	$2,319,614.54
Total operating expenses	$2,010,499.79	$1,634,007.73	$1,416,432.05	$1,296,174.82	$1,541,618.11	$1,440,164.77
Income from operation	$986,284.79	$1,189,310.57	$1,228,358.42	$632,909.86	$911,031.63	$879,449.77
Net income	$245,876.88	$552,419.68	$940,402.97	$337,229.58	$620,030.07	$542,434.15
Dividends	$200,000.00		$500,000.00	$700,000.00		
Surplus from operations of year	$45,876.88	$552,419.68	$440,402.97	[1] $362,770.42	$620,030.07	$542,434.15
Rate per cent of dividend	10		25	35		
TRAFFIC AND MILEAGE STATISTICS.[2]						
Passenger traffic:						
1. Number of passengers carried earning revenue	37,083	6,335	4,640	2,293	1,863	2,359
5. Total passenger revenue	$2,664.22	$779.49	$688.85	$333.51	$271.64	$343.15
6. Average amount received from each passenger (cents)	7.184	12.304	14.846	14.545	14.581	14.547
8. Total passenger earnings	$2,664.22	$779.49	$688.85	$333.51	$271.64	$343.15
9. Passenger earnings per mile of road	$85.89	$25.13	$30.20	$15.20	$12.38	$13.90
Freight traffic:						
11. Number of tons carried of freight earning revenue	23,569,859	21,663,683	18,162,451	15,408,325	18,282,165	16,828,380
15. Total freight revenue	$2,978,780.09	$2,810,792.74	$2,629,161.71	$1,919,252.91	$2,452,378.10	$2,319,271.39
16. Average amount received for each ton of freight (cents)	12.638	12.975	14.476	12.456	13.414	13.782
18. Total freight earnings	$2,978,780.09	$2,810,792.74	$2,629,161.71	$1,919,252.91	$2,452,378.10	$2,319,271.39
19. Freight earnings per mile of road	$96,027.73	$90,612.27	$115,263.56	$87,477.34	$111,776.57	$93,973.72
Total traffic:						
21. Gross earnings from operation	$2,996,784.58	$2,823,318.30	$2,644,790.47	$1,929,084.68	$2,452,649.74	$2,319,614.54
22. Gross earnings from operation per mile of road	$96,608.14	$91,017.03	$115,948.73	$87,925.46	$111,788.95	$93,987.62
24. Operating expenses	$2,010,499.79	$1,634,007.73	$1,416,432.05	$1,296,174.82	$1,541,618.11	$1,440,164.77
25. Operating expenses per mile of road	$64,813.02	$52,675.94	$62,096.98	$59,078.16	$70,265.19	$58,353.51
27. Income from operation	$986,284.79	$1,189,340.57	$1,228,358.42	$632,909.86	$911,031.63	$879,449.77
28. Income from operation per mile of road	$31,795.13	$38,341.09	$53,851.75	$28,847.30	$41,523.77	$35,634.11
Car mileage, etc.:						
41. Average mileage operated during year	31.02	31.02	22.81	21.94	21.94	24.68

[1] Represents deficit.

[2] Omission of data for certain items under "Traffic and mileage statistics" explained by reason of this company conducting a switching business only and no record kept of mileage, etc.

Statement showing freight traffic movement (company's material excluded), compiled from annual reports of Union Railroad Co., to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.[1]

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF AGRICULTURE.										
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Grain: Freight received from connecting roads and other carriers						602	570	194		
Hay: Freight received from connecting roads and other carriers					1,760		1,588	1,659		
Tobacco: Freight received from connecting roads and other carriers						1,100				
Total: Freight received from connecting roads and other carriers					1,760					
PRODUCTS OF ANIMALS.										
Live stock: Freight received from connecting roads and other carriers						19	26	23		
PRODUCTS OF MINES.										
Anthracite coal: Freight received from connecting roads and other carriers					4,594	5,503	3,668	2,862		
Bituminous coal:										
Freight originating on this road					1,212,405	1,089,883	827,206	561,720	522,541	439,521
Freight received from connecting roads and other carriers					1,132,152	1,208,121	852,407	1,121,565	1,345,318	1,306,092
Total freight tonnage					2,344,557	2,298,004	1,679,613	1,683,285	1,867,859	1,745,613
Coke: Freight received from connecting roads and other carriers					4,217,824	3,504,824	2,677,418	2,293,716	2,495,144	2,595,236
Ores: Freight received from connecting roads and other carriers					6,296,304	5,927,951	5,983,324	3,985,631	5,123,559	4,562,660
Stone, sand, and other like articles: Freight received from connecting roads and other carriers					2,640,001	2,074,534	1,422,106	1,316,922	1,581,562	1,530,446
Total:										
Freight originating on this road					1,212,405					
Freight received from connecting roads and other carriers					14,290,875					
Total freight tonnage					15,503,280					

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[1] For the years 1911 to 1908 this information was not called for in the forms for reports to be filed by companies classed as switching and terminal.

Statement showing freight traffic movement (company's material excluded), compiled from annual reports of Union Railroad Co., to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902—Continued.

Item.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
PRODUCTS OF FORESTS.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Lumber: Freight received from connecting roads and other carriers					82,753	63,090	50,607	37,010	46,553	32,845
Total freight tonnage					82,753					
MANUFACTURES.										
Iron, pig and bloom:										
Freight originating on this road					2,765,326	2,650,969	2,446,830	2,258,151	2,359,208	2,290,484
Freight received from connecting roads and other carriers					520,702	559,708	396,045	217,657	535,209	594,276
Total freight tonnage					3,286,028	3,210,677	2,842,875	2,475,808	2,894,417	2,884,760
Iron and steel rails: Freight originating on this road					614,013	658,898	494,951	495,633	542,518	500,524
Other castings and machinery:										
Freight originating on this road					8,276	5,574	6,206	4,667	4,743	5,492
Freight received from connecting roads and other carriers					33,405	15,770	11,970	18,926	23,530	9,756
Total freight tonnage					41,681	21,344	18,176	23,593	28,273	15,248
Bar and sheet metal:										
Freight originating on this road					1,767,504	1,655,587	1,294,286	950,834	1,351,757	1,257,657
Freight reeived from connecting roads and other carriers					62,525	39,326	15,668	20,058	14,125	10,921
Total freight tonnage					1,830,029	1,694,913	1,309,954	970,892	1,365,882	1,268,578
Cement, brick, and lime: Freight received from connecting roads and other carriers					229,122	165,523	105,315	89,735	129,450	83,937
Total:										
Freight originating on this road					5,155,119					
Freight received from connecting roads and other carriers					845,754					
Total freight tonnage					6,000,873					

Miscellaneous, other commodities not mentioned above:										
Freight originating on this road					1,335,365	1,462,427	1,149,272	1,523,056	1,602,795	1,034,466
Freight received from connecting roads and other carriers					645,828	574,274	422,988	508,306	604,153	574,067
Total freight tonnage					1,981,193	2,036,701	1,572,260	2,031,362	2,206,948	1,608,533
Total tonnage:										
Freight originating on this road					7,702,889	7,523,338	6,218,751	5,794,061	6,383,562	5,528,144
Freight received from connecting roads and other carriers					15,866,970	14,140,345	11,943,700	9,614,264	11,898,603	11,300,236
Total freight tonnage					23,569,859	21,663,683	18,162,451	15,408,325	18,282,165	16,828,380

Statement compiled from annual reports of the Pittsburg, Bessemer & Lake Erie Railroad Co.[1] to the Interstate Commerce Commission for the years ending June 30, 1911 to 1902.[2]

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$12,000,000	$12,000,000	$12,000,000	$12,000,000
Funded debt outstanding at end of year	$15,096,000	$15,269,000	$15,342,000	$15,415,000
Single-track mileage owned at end of year—main line	152.30	152.61	152.61	152.61
Single-track mileage owned at end of year—branches and spurs	25.25	25.81	21.97	21.97
Net corporate income	$419,961.00	$566,505.50	$739,005.16	$419,895.75
Dividends declared from income	[3] $419,961.00	[3] $419,943.00	[3] $419,923.50	[3] $419,895.75
Other disbursements from net corporate income			$319,081.66	
Balance for year carried forward to credit of profit and loss		$146,562.50		

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000
Funded debt outstanding at end of year	$15,547,000	$15,754,000	$15,961,000	$16,093,000	$16,300,000	$16,441,903
Single-track mileage owned at end of year—main line	152.61	153.06	153.29	153.29	152.75	153.29
Single-track mileage owned at end of year—branches and spurs	21.97	21.97	23.07	53.40	50.60	44.72
Net income	$419,925.00	$419,919.75	$420,000.00	$420,000.00	$419,953.50	$419,880.75
Dividends	[3] $419,925.00	[3] $419,919.75	[3] $420,000.00	[3] $420,000.00	[3] $419,953.50	[3] $419,880.75

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[1] The annual reports of this company for the year 1908 and for subsequent years indicate that it was controlled by the Carnegie Steel Co.; this information was not given or called for in reports for prior years. The annual reports do not indicate that the Pittsburg, Bessemer & Lake Erie Railroad Co. controlled any other transportation companies. The annual reports indicate that the Pittsburg, Bessemer & Lake Erie Railroad Co. leased the Meadville, Conneaut Lake & Linesville Railroad, which it included in its lease to the Bessemer & Lake Erie Railroad Co.

[2] For some items the figures shown for 1908 and for subsequent years are not fully comparable with those shown for 1907 and prior years, because of changes in classifications and report forms. Operating details not called for in the forms for reports to be filed by lessor companies.

[3] Represents a dividend of 3 per cent on common stock and a dividend of 6 per cent on preferred stock.

The CHAIRMAN. With the permission of the Committee, I will ask Mr. Freer to suspend at this point, and I will swear Mr. Woolley.

STATEMENT OF ROBERT W. WOOLLEY.

The witness was sworn by the chairman.

The CHAIRMAN. I have here, Mr. Woolley, statements of tonnages from plants of the various Steel Corporation companies. I believe you collected them. I will ask you to state to the committee from whence you secured these statements.

Mr. WOOLLEY. I secured these tonnages from the traffic managers of the several railroads—the Minneapolis, St. Paul & Sault Ste. Marie Railway Co., the Chicago, Burlington & Quincy——

Mr. YOUNG. You mean you received the information relating to a particular road from the traffic manager of that road?

Mr. WOOLLEY. From the traffic managers of the respective roads; yes. They were prepared at my request for the committee.

The Chicago, Milwaukee & St. Paul Railway Co., the Chicago, Burlington & Quincy, the Chicago, Rock Island & Pacific Railway Co., and the Wheeling & Lake Erie Railroad Co.

The three statements I have here relative to the Wheeling & Lake Erie Railroad Co. were obtained in response to a request made by the committee for a statement of commodities received from the American Steel & Wire Co., via the Lake Terminal Railroad, a Steel Corporation subsidiary. These cover the years 1909, 1910, and 1911.

I have here three statements of tonnages received from the National Tube Co., at South Lorain, showing tonnage, commodities, and ultimate destination for the years ending June 30, 1909, 1910, and 1911. These were prepared at the request of the committee, and were furnished by the Steel Corporation.

The statements referred to are in the words and figures following, to wit:

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE RAILWAY CO.

Statement of commercial freight shipped by the Illinois Steel Co., United States Steel Co., and the American Steel Wire Co., at Joliet, Waukegan, Gary, Ind., and South Chicago, to Milwaukee, St. Paul, Minn., transfer, and Minneapolis, and beyond, for the 5 years ending Dec. 31, 1910.

Shipped by—	From—	Commodity.	1906		1907		1908		1909		1910		Total for 5 years.	
			Tonnage.	Earnings.	Tonnage.	Earnings.	Tonnage.	Earnings.	Tonnage.	Earnings.	Tonnage.	Earnings.	Tonnage.	Soo earnings.
Illinois Steel Co.	South Chicago	Rails	4,337	$3,368.28	1,019	$855.44	4,913	$4,540.34	6,410	$7,044.30	2,908	$3,399.19	19,587	$19,207.55
Do.	do	Steel plates	3,779	6,540.55	3,514	6,583.91	965	1,821.86	867	1,740.45	3,017	6,373.28	12,142	23,060.05
Do.	do	Angle bars	282	278.84	388	414.58	284	296.85	50	67.40	240	305.44	1,244	1,363.11
Do.	do	Spikes	436	516.58	952	1,171.83	101	107.66	169	275.74			1,658	2,071.81
Do.	do	Wire	24	45.73	25	83.95							49	129.68
Do.	do	Structural steel	2,247	4,135.38	3,333	6,115.71	872	1,580.40	699	1,399.99	3,391	6,982.64	10,542	20,214.12
Do.	do	Bolts			33	44.51	35	37.84	109	147.15			177	229.50
Do.	do	Nails			22	35.03							22	35.03
Do.	do	Splices					31	52.10	76	85.18	52	55.04	159	192.32
Do.	Gary, Ind	Rails							336	361.58	737	906.01	1,073	1,267.59
Do.	do	Structural steel									576	1,207.81	576	1,207.81
Do.	do	Bar steel									128	287.18	128	287.18
Do.	Joliet, Ill.	Spikes	240	307.66	537	616.89	52	77.20	32	39.54	132	252.58	993	1,293.87
Do.	do	Angle bars	74	91.83	111	117.67					89	150.72	274	360.22
Do.	do	Bolts	21	20.12	31	38.33			21	27.35	4	17.15	77	102.95
Do.	do	Steel plates			39	48.79	20	18.70			714	1,304.65	773	1,372.14
Do.	do	Wire and nails					21	41.57					21	41.57
Do.	do	Rail joints									482	738.95	482	738.95
United States Steel Co.	South Chicago	Steel plates			223	456.28					186	380.50	409	836.78
Do.	do	Rails					327	294.97	197	222.77	835	919.60	1,359	1,437.34
Do.	do	Angle bars and bolts					73	68.97			32	42.70	105	111.67
Do.	do	Structural steel							22	46.23	513	1,068.43	535	1,114.66
Do.	do	Splices									22	23.00	22	23.00
Do.	Gary, Ind	Structural steel									66	135.78	66	135.78
Do.	Joliet, Ill.	Wire hoops					55	110.87					55	110.87
Do.	do	Sulphate of iron					22	51.60					22	51.60
Do.	do	Spikes							24	33.36	22	30.24	46	63.60
Do.	Waukegan	Sulphate of iron							40	90.48	60	134.74	100	225.22
American Steel & Wire Co.	South Chicago													
Do.	Gary, Ind													
Do.	Joliet, Ill.	Wire	1,609	3,759.54	474	951.08	1,044	2,087.29	415	864.32	976	2,409.93	4,518	10,072.16
Do.	do	Nails	441	905.78	390	727.41	511	901.79	655	1,246.62	1,252	2,515.78	3,249	6,297.38
Do.	do	Staples	48	70.57	148	286.72	32	46.65			17	30.46	245	434.40
Do.	do	Wire, nails, and staples.	85	195.22	201	401.46	948	1,989.27	519	1,048.12	428	936.01	2,181	4,570.08
Do.	do	Wire fencing			16	49.45	250	616.27	494	1,046.73	223	445.93	983	2,158.38

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE RAILWAY CO.—continued

Statement of commercial freight shipped by the Illinois Steel Co., United States Steel Co., and the American Steel Wire Co., at Joliet, Waukegan, Gary, Ind., and South Chicago, to Milwaukee, St. Paul, Minn , transfer, and Minneapolis, and beyond, for the 5 years ending Dec. 31, 1910—Continued.

Shipped by	From—	Commodity.	1906		1907		1908		1909		1910		Total for 5 years.	
			Tonnage.	Earnings.	Tonnage.	Earnings.	Tonnage.	Earnings.	Tonnage.	Earnings.	Tonnage.	Earnings.	Tonnage.	Soo earnings.
American Steel & Wire Co.	Joliet, Ill	Sulphate of iron					90	$204 06			6	$25.33	96	$229.39
Do	do	Plates					21	50.04					21	50.04
Do	do	Spikes							31	$62.60			31	62.60
Do	Waukegan	Wire	207	$421.36	549	$1,100.70	322	583.41	349	799.62	88	265.09	1,515	3,170.18
Do	do	Nails	23	52.86			18	36.32					41	89.18
Do	do	Wire fencing			94	214.71	82	174.31			56	124.66	232	513.68
Do	do	Wire and staples			26	61.37	40	81.59					66	142.96
Do	do	Sulphate of iron					75	193.20	21	46.30	20	45.58	116	285.08
Do	do	Staples							18	40.32			18	40.32
Do	do	Bar steel									18	40.32	18	40.32
Grand total			13,853	20,710.30	12,125	20,375.82	11,204	16,065.13	11,554	16,736.15	17,290	31,554.72	66,026	105,442.12

NOTE. Earnings as shown above represents Soo Line earnings up to St. Paul and Minneapolis.

CHICAGO, BURLINGTON & QUINCY RAILROAD CO., LINES EAST OF THE MISSOURI RIVER.

Statement showing weight and charges on shipments of iron and steel articles from Gary, Ind., Joliet, South Chicago, and Waukegan to Minneapolis and St. Paul during the calendar years 1906–1910.

	Rails and fastenings.		Wire and nails.		Structural iron and steel.		Other iron and steel articles.	
	Weight.	Freight charges.	Weight.	Freight charges.	Weight.	Freight charges.	Weight.	Freight charges.
1906.								
Gary, Ind., to Minneapolis								
Joliet to Minneapolis	54,790	$38.35	237,574	$297.00				
South Chicago to Minneapolis					137,973	$172.56	32,400	$42.60
Waugegan to Minneapolis								
Total	54,790	38.35	237,574	297.00	137,973	172.56	32,400	42.60
Gary, Ind., to St. Paul								
Joliet to St. Paul	20,482,083	15,795.31	376,200	263.34	289,131	339.36	1,413,637	1,017.57
South Chicago to St. Paul	90,283,285	72,096.66	33,162	47.76	113,858	142.54	43,670	39.30
Waukegan to St. Paul			250,655	715.80				
Total	110,765,368	87,891.97	660,017	1,026.90	402,989	481.90	1,457,307	1,056.87
1907.								
Gary, Ind., to Minneapolis								
Joliet to Minneapolis								
South Chicago to Minneapolis	120,900	151.12	40,020	50.03				
Waukegan to Minneapolis			72,040	90.28				
Total	120,900	151.12	112,060	140.31				
Gary, Ind., to St. Paul								
Joliet to St. Paul	36,037,942	31,003.76	883,196	854.14	761,191	609.60	3,211,225	2,963.99
South Chicago to St. Paul	196,447,417	158,244.40			61,300	76.63	732,103	863.91
Waukegan to St. Paul			580,021	713.15				
Total	232,485,359	189,248.16	1,463,217	1,567.29	822,491	686.23	3,943,328	3,827.90
1908.								
Gary, Ind., to Minneapolis								
Joliet to Minneapolis	142,700	124.85						
South Chicago to Minneapolis	15,951,908	12,128.94			284,627	355.78	38,205	47.76
Waukegan to Minneapolis								
Total	16,094,608	12,253.79			284,627	355.78	38,205	47.76

CHICAGO, BURLINGTON & QUINCY RAILROAD CO., LINES EAST OF THE MISSOURI RIVER—continued.

Statement showing weight and charges on shipments of iron and steel articles from Gary, Ind., Joliet, South Chicago, and Waukegan to Minneapolis and St. Paul during the calendar years 1906–1910—Continued.

	Rails and fastenings.		Wire and nails.		Structural iron and steel.		Other iron and steel articles.	
	Weight.	Freight charges.	Weight.	Freight charges.	Weight.	Freight charges.	Weight.	Freight charges.
1908.								
Gary, Ind., to St. Paul								
Joliet to St. Paul	19,618,100	$16,038.12			1,404,660	$1,165.72	279,075	$258.05
South Chicago to St. Paul	83,199,811	58,254.96			379,296	403.02	239,559	299.46
Waukegan to St. Paul			202,770	$255.27			52,300	65.38
Total	102,817,911	74,293.08	202,770	255.27	1,783,956	1,568.74	570,934	622.89
1909.								
Gary, Ind., to Minneapolis	15,434,390	11,910.89						
Joliet to Minneapolis	1,208,620	890.02	36,675	51.35	2,876,960	2,487.28	648,300	730.48
South Chicago to Minneapolis	18,667,927	14,465.20			304,270	425.60	90,723	89.26
Waukegan to Minneapolis								
Total	35,310,937	27,266.11	36,675	51.35	3,181,230	2,912.88	739,023	819.74
Gary, Ind., to St. Paul	12,208,160	8,505.93						
Joliet to St. Paul	24,123,720	21,344.79	76,383	106.94	399,220	349.92	4,361,229	3,864.05
South Chicago to St. Paul	17,580,961	13,686.31			538,357	621.76	52,250	45.72
Waukegan to St. Paul								
Total	53,912,841	43,537.03	76,383	106.94	937,577	971.68	4,413,479	3,909.77
1910.								
Gary, Ind., to Minneapolis	34,214,088	27,148.83			866,514	1,132.05		
Joliet to Minneapolis	30,970,123	24,962.60			552,710	443.71	3,760,142	3,345.10
South Chicago to Minneapolis	897,655	1,893.80			250,363	302.93		
Waukegan to Minneapolis			41,355	57.90			24,000	60.00
Total	66,081,866	54,005.23	41,355	57.90	1,669,587	1,878.69	3,784,142	3,405.10
Gary, Ind., to St. Paul	54,113,692	42,583.51			53,353	74.69	248,232	233.18
Joliet to St. Paul	15,094,185	13,476.84	332,490	388.65			3,067,205	2,811.14
South Chicago to St. Paul	24,942,629	17,287.02			39,210	43.93	583,460	517.21
Waukegan to St. Paul			37,385	52.34				
Total	94,150,506	73,347.37	369,875	440.99	92,563	118.62	3,898,897	3,561.53

OFFICE OF AUDITOR FREIGHT ACCOUNTS,
Chicago, Ill., November 15, 1911.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY CO.

Statement of shipments forwarded by the United States Steel Corporation originating in the mills at South Chicago, Gary, Joliet, and Waukegan, and shipped over the Chicago, Milwaukee & St. Paul Ry. to St. Paul, Minneapolis, Omaha, and Milwaukee during the years 1906–1910.

	Weight.	Charges.
	Pounds.	
To Omaha	5,996,803	$15,167.53
To St. Paul	3,669,032	4,260.66
To Minneapolis	34,794,677	45,447.77
To Milwaukee	685,827,454	275,132.65
Grand total	730,287,966	340,008.61

ACCOUNTING DEPARTMENT,
December 30, 1911.
(F. A. No. 499.)

Statement of shipments forwarded by the United States Steel Corporation, originating in the mills at South Chicago, Gary, Joliet, and Waukegan and shipped over the Chicago, Milwaukee & St. Paul Ry. Co. to Omaha, Nebr.

Commodity.	1906		1907		1908	
	Weight.	Freight charges.	Weight.	Freight charges.	Weight.	Freight charges.
	Pounds.		*Pounds.*		*Pounds.*	
Barbed wire	127,392	$343.95	74,454	$206.09	412,142	$1,112.78
Bale ties			44,860	121.12	82,300	222.21
Bolts and nuts			184,756	230.94	104,750	130.93
Fence wire	44,038	118.90			110,205	297.56
Plates	93,225	251.71			19,215	61.49
Plain wire					45,753	123.53
Pump rods			44,645	127.58		
Staples					32,460	87.48
Structural steel					122,878	331.77
Spikes					378,000	472.50
Wire nails	180,080	486.21	296,698	801.07	833,172	2,249.70
Total	444,735	1,200.77	645,413	1,486.80	2,140,875	5,089.95

Commodity.	1909		1910	
	Weight.	Freight charges.	Weight.	Freight charges.
	Pounds.		*Pounds.*	
Barbed wire			77,293	$208.69
Bale ties			46,931	126.71
Bar steel			36,740	117.57
Plates	455,234	$1,234.86	185,316	500.36
Plain wire	37,500	101.25	40,008	108.02
Rails			59,531	160.73
Rail joints	42,280	58.14	47,420	65.20
Structural steel	250,499	682.23	907,449	2,450.09
Wire nails	530,439	1,443.48	49,140	132.68
Total	1,315,952	3,519.96	1,449,828	3,870.05

Total to Omaha, Nebr.:

Weight ....pounds..	5,996,803
Freight charges	$15,167.53

Statement of shipments forwarded by the United States Steel Corporation originating in the mills at South Chicago, Gary, Joliet, and Waukegan, and shipped over the Chicago, Milwaukee & St. Paul Ry. Co., to St. Paul, Minn.

Commodity.	1906		1907		1908	
	Weight.	Freight charges.	Weight.	Freight charges.	Weight.	Freight charges.
	Pounds.		*Pounds.*		*Pounds.*	
Bar steel						
Barbed wire	42,917	$53.65				
Bale ties			42,070	$52.59	37,000	$46.25
Cement			1,016,500	815.20		
Fence wire					41,860	52.32
Plates						
Plain wire	38,645	52.80	285,910	326.86	221,270	282.58
Pump rods					30,090	37.61
Structural steel	84,522	105.65			544,506	680.64
Spikes	54,340	40.76				
Wire nails			78,799	98.50	38,880	48.61
Total	220,424	252.86	1,423,279	1,293.15	913,606	1,148.01

Commodity.	1909		1910	
	Weight.	Freight charges.	Weight.	Freight charges.
	Pounds.		*Pounds.*	
Bar steel			143,989	$201.58
Barbed wire	150,950	$211.33		
Bale ties				
Cement				
Fence wire				
Plates	144,345	202.08	114,000	159.60
Plain wire			113,835	159.38
Pump rods				
Structural steel	145,513	203.28	299,361	429.39
Spikes				
Wire nails				
Total	440,808	616.69	671,185	949.95

Total to St. Paul, Minn.:
Weight..........pounds.. 3,669,032
Freight charges.......... $4,260.66

Statement of shipments forwarded by the United States Steel Corporation, originating in the mills at South Chicago, Gary, Joliet, and Waukegan, and shipped over the Chicago, Milwaukee & St. Paul Ry. Co., to Minneapolis, Minn.

Commodity.	1906		1907		1908	
	Weight.	Freight charges.	Weight.	Freight charges.	Weight.	Freight charges.
	Pounds.		*Pounds.*		*Pounds.*	
Bale ties			714,440	$893.05	561,080	$717.63
Barbed wire	42,605	$53.25	191,890	240.06	217,319	271.65
Cement	106,400	85.12	216,600	174.28	543,400	434.72
Fence wire	32,265	40.33			179,839	224.70
Plain wire	61,645	77.06	208,658	260.82	36,820	46.03
Plates	154,085	192.62	187,495	234.37	427,140	565.03
Rails					46,910	36.65
Spikes	251,000	216.18			104,800	107.35
Structural steel	2,218,847	2,315.83			6,131,936	7,702.71
Sheet steel			833,595	1,059.32		
Wire hoops			285,150	481.63	538,695	689.31
Total	2,866,847	2,980.39	2,637,828	3,343.53	8,787,939	10,795.78

Commodity.	1909		1910	
	Weight.	Freight charges.	Weight.	Freight charges.
	Pounds.		*Pounds.*	
Bar steel			136,227	$190.72
Bale ties	519,240	$726.93	402,825	525.05
Barbed wire	302,904	476.79	237,942	331.72
Fence wire	32,260	50.40	46,015	64.42
Plain wire	126,992	177.79	194,808	306.69
Plates	3,548,720	4,968.25	2,290,011	3,218.98
Pig iron			56,800	50.71
Rails	266,890	208.75		
Spikes	99,930	50.39	62,700	26.65
Structural steel	6,431,679	8,942.21	5,084,704	7,143.73
Wire nails	41,672	58.34	43,500	60.90
Wire springs			41,982	58.77
Wire hoops	237,100	273.87	297,162	416.01
Total	11,607,387	15,933.72	8,894,676	12,394.35

Total to Minneapolis, Minn.:	
Weight, pounds	34,794,677
Freight charges	$45,447.77

Statement of shipments forwarded by the United States Steel Corporation, originating in the mills at South Chicago, Gary, Joliet, and Waukegan, and shipped over the Chicago, Milwaukee & St. Paul Railway Co. to Milwaukee, Wis.

Commodity.	1906		1907		1908	
	Weight.	Freight charges.	Weight.	Freight charges.	Weight.	Freight charges.
	Pounds.		*Pounds.*		*Pounds.*	
Bale ties			234,330	$58.59	140,105	$40.41
Billets	178,378,918	$68,193.98	229,482,218	87,473.64	15,908,280	6,392.30
Bolts and nuts	255,302	135.15	1,367,487	686.80	4,430,549	2,154.13
Barbed wire	1,293,759	656.40	1,039,497	451.64	457,000	227.49
Cement			1,377,600	749.80	281,200	149.92
Cupola patching	93,660	49.83				
Cinder ladle	172,860	229.22				
Engine parts	105,020	130.53				
Fence staples	75,260	37.63				
Fence wire	38,450	19.22			430,176	215.08
Mill scale	4,613,640	1,741.96	1,627,700	363.30		
Plates	391.875	175.11	6,007,589	2,765.15	1,031,753	487.06
Plain wire	369,060	179.87	3,127,914	813.76	2,087,069	746.35
Rails	21,961,148	11,598.91	57,892,947	23,252.53	423,910	168.50
Rail ends	54,420	31.59				
Rail joints					16,380	8.19
Rough castings			385,840	209,12	536,280	203.23
Spikes	1,967,066	923.43	3,499,067	1,677.78	10,562,312	5,173.32
Staples			74,200	37.10	93,096	46.55
Sheet steel	30,000	13.50	191,025	85.94		
Structural steel	2,011,145	893.61	16,027,580	7,490.58	3,681,640	1,502.14
Scrap wire	62,260	23.74				
Wire nails	2,362,914	1,227.48	2,439,180	1,213.67	2,383,555	1,197.50
Total	214,236,757	86,261.16	324,774,174	127,329.40	42,463,305	18,712.17

Commodity.	1909		1910	
	Weight.	Freight charges.	Weight.	Freight charges.
	Pounds.		*Pounds.*	
Bar steel	121,490	$36.44	1,289,693	$686.35
Bale ties	114,268	34.27	214,378	55.34
Billets	19,131,012	7,739.12	223,440	73.59
Bolts and nuts	766,644	267.52	3,387,681	1,606.17
Barbed wire	854,943	414.39	272,599.	128.89
Fence wire	447,788	217.88	895,837	447.89
Galvanized wire	44,100	22.05	39,502	11.85
Machinery	87,000	63.60		
Plates	12,585,217	4,059.36	9,316,134	4,656.46
Pig iron	68,660	15.32	615,400	247.25
Plain wire	2,581,761	814.05	3,080,616	951.29
Rails	496,496	256.87	1,658,640	425.63
Rail joints	352,020	159.04		
Rough castings	132,632	69.87		
Spiral springs	63,965	76.76		
Spikes	2,172,761	860.94	8,589,288	3,505.97
Staples	185,850	84.24	421,416	210.71
Structural steel	18,127,990	6,419.01	12,069,925	6,102.30
Scrap iron	341,600	76.25		
Wire hoops	87,475	23.96		
Wire nails	1,925,342	969.39	2,058,247	999.42
Wire springs			50,175	15.00
Wire strand	30,000	9.00	51,233	16.48
Total	60,719,014	22,689.33	43,634,204	20,140.59

Total to Milwaukee, Wis.:

Weight ... pounds	685,827,454
Freight charges	$275,132.65

THE CHICAGO, ROCK ISLAND AND PACIFIC RAILWAY CO.,
OFFICE AUDITOR FREIGHT TRAFFIC,
Chicago, January 17, 1912.

Statement showing commodities, tonnage, and total freight charges shipped by United States Steel Corporation from South Chicago, Joliet, Waukegan, and Gary to Kansas City, Omaha, St. Paul, and Minneapolis for five years ended Dec. 31, 1910.

From—	To—	Commodity.	1906		1907		1908		1909		1910	
			Tonnage.	Freight charges.	Tonnage.	Freight charges.	Tonnage.	Freight charges.	Tonnage.	Freight charges.	Tonnage.	Freight charges.
South Chicago	Kansas City	Rails	6,208,701	$5,504.67	173,560	$193.69	2,049,320	$1,721.24	254,420	$270.81		
Do	do	Steel plates	179,265	491.93	50,445	136.20	41,290	111.48	50,685	163.35	95,665	$291.79
Do	do	Channels					35,437	95.68	22,473	71.90		
Do	do	Angles and channels					30,322	81.87				
Do	do	Rails and splices					59,180	66.46				
Do	do	Rails and angle box					47,640	53.52				
Do	do	Rails and spikes									1,001,020	1,162.78
Do	Omaha	Steel plates	21,940	70.21	30,310	81.84	16,110	51.55	154,115	436.35	34,751	111.20
Do	do	Beams					86,265	232.92			50,891	159.61
Do	do	Channels									10,200	32.64
Do	St. Paul	Structural steel	49,747	62.18					66,464	93.05		
Do	do	Steel plates							136,040	213.46		
Do	do	Beams							127,520	178.53		
Do	do	Channels									11,388	28.47
Do	Minneapolis	Structural steel	2,400,383	3,021.54					56,626	78.28		
Do	do	Steel			578,003	722.56						
Do	do	Rails					77,800	62.90	64,100	71.79		
Do	do	Iron					16,586	41.47				
Do	do	Beams					30,000	42.00	169,576	251.66	726,477	1,017.04
Do	do	Steel plates							46,900	65.66	1,390,170	1,976.60
Do	do	Angles									129,161	180.83
Do	do	Channels									90,000	126.00
Gary	Kansas City	Rails									1,789,740	1,757.73
Do	Omaha	Bar steel									51,100	110.38
Do	Minneapolis	Structural steel										
Joliet	Kansas City	Wire fencing	269,971	728.92	125,616	253.06	108,774	293.70	81,257	219.39	50,070	56.08
Do	do	Wire	167,395	405.07	354,456	826.05	133,279	313.21				
Do	do	Spikes and bolts	104,500	145.78	261,877	327.34	42,000	52.50				
Do	do	Angle bars	784,180	724.29								
Do	do	Structural steel	40,824	88.18								
Do	do	Wire nails	197,735	534.31	60,950	164.57	49,140	132.68	90,740	245.00	151,729	409.68
Do	do	Sulphate of iron	50,235	75.35	42,620	63.93						
Do	do	Staples			39,327	82.19						
Do	do	Galvanized sheets									87,368	235.89
Do	Omaha	Wire	721,342	1,947.87	499,944	1,352.52	767,544	2,072.30	346,705	936.26	43,000	116.10

Statement showing commodities, tonnage, and total freight charges shipped by United States Steel Corporation from South Chicago, Joliet, Waukegan, and Gary to Kansas City, Omaha, St. Paul, and Minneapolis for five years ended Dec. 31, 1910—Continued.

From—	To—	Commodity.	1906		1907		1908		1909		1910	
			Tonnage.	Freight charges.	Tonnage.	Freight charges.	Tonnage.	Freight charges.	Tonnage.	Freight charges.	Tonnage.	Freight charges.
Joliet	Omaha	Wire nails	824,256	$2,225.50	367,441	$992.10	81,648	$220.45	395,852	$1,068.80	640,937	$1,732.66
Do	do	Wire and nails			277,087	748.12						
Do	do	Staples			74,341	200.72						
Do	do	Plates							21,540	55.14		
Do	do	Wire fencing							41,331	71.92	2,568	11.56
Do	do	Wire hoops							41,757	112.74		
Do	St. Paul	Wire	74,667	93.33								
Do	do	Nails			202,143	252.63						
Do	Minneapolis	Wire	461,538	621.28	127,251	159.16			289,145	404.81	120,229	168.42
Do	do	Wire nails	72,610	90.76	38,160	47.70					64,800	90.72
Do	do	Wire fencing	114,560	143.22	35,201	44.10	63,023	78.78			38,397	53.76
Do	do	Wire hoops							42,402	59.36	349,093	488.73
Waukegan	Kansas City	Wire fencing			323,870	731.25	31,900	62.21	35,820	74.51	121,641	278.75
Do	do	Wire			160,100	359.64	255,950	609.13	37,720	65.63		
Do	do	Bale ties			257,650	534.80	82,530	153.22				
Do	do	Staples			37,480	56.59						
Do	do	Rods			31,120	84.02	66,490	179.52	73,395	198.17		
Do	do	Zinc skimmings			69,040	63.52						
Do	do	Sulphate of iron					95,480	143.22				
Do	do	Bar steel									73,365	198.01
Do	do	Nails									43,977	92.35
Do	Omaha	Wire			39,290	106.08						
Do	do	Sulphate of iron							40,200	68.34	43,160	73.37
Do	St. Paul	Bale ties			59,290	74.11						
South Chicago	Kansas City	Rails	6,208,701	5,504.67	173,560	193.69	2,049,320	1,721.24	254,420	270.81		
Do	do	Steel plates	179,263	491.93	50,445	136.20	41,290	111.48	50,685	163.35	95,665	291.79
Do	do	Channels					35,437	95.68	22,473	71.90		
Do	do	Angles and channels					30,322	81.87				
Do	do	Rails and splices					59,180	66.46				
Do	do	Rails and angle box					47,640	53.52				
Do	do	Rails and spikes									1,001,020	1,162.78
Do	Omaha	Steel plates	21,940	70.21	30,310	81.84	16,110	51.55	154,115	436.35	34,751	111.20
Do	do	Beams					86,263	232.92			50,891	159.61
Do	do	Channels									10,200	32.64
Do	St. Paul	Structural steel	49,747	62.18					66,464	93.05		
Do	do	Steel plates							136,040	213.46		
Do	do	Beams							127,520	178.53		
Do	do	Channels									11,388	28.47
Do	Minneapolis	Structural steel	2,400,383	3,021.54					56,626	78.28		

Do	do	Steel			578,003	722.56						
Do	do	Rails					77,800	62.90	64,100	71.79		
Do	do	Iron					16,586	41.47				
Do	do	Beams					30,000	42.00	169,576	251.66	726,477	1,017.04
Do	do	Steel plates							46,900	65.66	1,390,170	1,976.60
Do	do	Angles									129,161	180.83
Do	do	Channels									90,000	126.00
Gary	Kansas City	Rails									1,789,740	1,757.73
Do	Omaha	Bar steel									51,100	110.38
Do	Minneapolis	Structural steel									50,070	56.08
Joliet	Kansas City	Wire fencing	269,971	728.92	125,616	253.06	108,774	293.70	81,257	219.39		
Do	do	Wire	167,395	405.07	354,456	826.05	133,279	313.21				
Do	do	Spikes and bolts	104,500	145.78	261,877	327.34	42,000	52.50				
Do	do	Angle bars	784,180	724.29								
Do	do	Structural steel	40,824	88.18								
Do	do	Wire nails	197,735	534.31	60,950	164.57	49,140	132.68	90,740	245.00	151,729	409.68
Do	do	Sulphate of iron	50,235	75.35	42,620	63.93						
Do	do	Staples			39,327	82.19						
Do	do	Galvanized sheets									87,368	235.89
Do	Omaha	Wire	721,342	1,947.87	499,944	1,352.52	767,544	2,072.30	346,705	936.26	43,000	116.10
Do	do	Wire nails	824,256	2,225.50	367,441	992.10	81,648	220.45	395,852	1,068.80	640,937	1,732.66
Do	do	Wire and nails			277,087	748.12						
Do	do	Staples			74,341	200.72						
Do	do	Plates							21,540	55.14		
Do	do	Wire fencing							41,331	71.92	2,568	11.56
Do	do	Wire hoops							41,757	112.74		
Do	St. Paul	Wire	74,667	93.33								
Do	do	Nails			202,143	252.63						
Do	Minneapolis	Wire	461,538	621.28	127,251	159.16			289,145	404.81	120,229	168.42
Do	do	Wire nails	72,610	90.76	38,160	47.70					64,800	90.72
Do	do	Wire fencing	114,560	143.22	35,201	44.10	63,023	78.78			38,397	53.76
Do	do	Wire hoops							42,402	59.36	349,093	488.73
Waukegan	Kansas City	Wire fencing			323,870	731.25	31,900	62.21	35,820	74.51	121,641	278.75
Do	do	Wire			160,100	359.64	255,950	609.13	37,720	65.63		
Do	do	Bale ties			257,650	534.80	82,530	153.22				
Do	do	Staples			37,480	56.59						
Do	do	Rods			31,120	84.02	66,490	179.52	73,395	198.17		
Do	do	Zinc skimmings			69,040	63.52						
Do	do	Sulphate of iron					95,480	143.22				
Do	do	Bar steel									73,365	198.01
Do	do	Nails									43,977	92.35
Do	Omaha	Wire			39,290	106.08						
Do	do	Sulphate of iron							40,200	68.34	43,160	73.37
Do	St. Paul	Bale ties			59,290	74.11						

THE WHEELING & LAKE ERIE RAILROAD CO.

(B. A. Worthington, Receiver.)

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination.

FISCAL YEAR ENDING JUNE 30, 1911.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Bil-lets.	Pole steps.	Rope.	Tacks.
ALABAMA.															
Birmingham	124	18			18				116						
Bessemer										48					
Mobile	20														
Pratt City										62					
Prattville	21														
Bridgeport	23														
Silver Hill	18														
Marburg	18														
Florence		15													
Gadsden		21													
ARKANSAS.															
Little Rock		16													
Springdale	20														
Stuttgart	20														
ARIZONA.															
Haden Junction									18						
Keloin	22														
CALIFORNIA.															
Los Angeles	64								22						
San Francisco	739								22	35					
Sacramento									22						
West Berkeley	56														
COLORADO.															
Denver	290	20	73						84	43					

CONNECTICUT.															
Hartford	25		150						19						
New Britain	101		20												
New Haven	48							2,587							
Shelton	127														
CANADA.															
Walkersville	3,506							42	32						
Brantford	94							195							
Waterville	83														
Drayton	18														
Atwater	84														
Bowmansville	45														
Meaford	18														
Whitley	27														
Hamilton	2,859				51			2,579							
Woodstock	910														
Cayuga	18														
Winnipeg	231		20												
Toronto	222			25					24						
St. Catherine	38														
Dominion	29							135							
Montreal	159							28							
Highland	78							802							
Tilsonburg	18														
Oshawa									19						
West Toronto	245							142							
Stratford	571														
Danville	19														
Barrie	13														
Elmwood	18														
Mantola	21														
Belhi	18														
Lucknow	18														
Swansea	209														
Hartford			10												
South Roxton	22														
Gananque	20														
Mitchel	42														
Dublin	18														
Canfield	18														
Dresden	18														
Caledonia	20														
Ingersoll	24		106												
Oil Spring	18														
St. Marys	18														
Kincardine	20														
Exerter	90														
Wolverton	18														
New Market	57														
Dunnvelle	18														

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Bil-lets.	Pole steps.	Rope.	Tacks.
CANADA—continued.															
St. Johns	21														
St. Phelix De Vallia	19														
White Church	18														
Richmond	18														
Arthur	19														
Linwood	18														
Park Hill	18														
Sebringville	18														
Bristol	21														
Vancouver	30														
St. Thomas	44														
Grunburg	32														
Penetagushene	18														
IDAHO.															
Meridian										20					
Rapid City	22														
INDIANA.															
Dana		15													
Winchester		12													
Muncie	57														
La Fayette	47														
Hammond	117		224												
Crawfordsville	57							4,792							
Indianapolis	1,049							137	92	40					
Fort Wayne			20						23						
Morristown		20													
Anderson	42							2,135	23			63,922			
Marshall		18													
Peru	16	16													
Troy		40													
Tipton		24													
Portland		28													

Kendallville		25													
Swayzee		13													
Marion	60				17										
Linden		13													
Greentown		25													
Rushville		36													
Vincennes		21													
Howe		13													
Brazil		23													
Lapel		13													
Stroh		13													
Coraopolis								73							
Jeffersonville	18														
New Paris		13													
Berne	12														
Petersburg	30														
Frankfort								58	12						
Wakarusa		14													
Shelbyville	40														
Kokomo				31											
Caritaloupe		16													
Topeka		13													
Clay City		15													
North Salem		12													
Eaton		34													
College Corner									26						
Farmersburg		18													
Evansville	429									23					
Roachville	12														
Montezuma		16													
Lagro	21														
Henderson									27						
Walcottville	22														
Greensburg	304														
Bluffton					26										
IOWA.															
Clinton	182				25										
Des Moines	102								108						
Waterloo									66						
Davenport									21						
Ottumwa	19								19						
Sioux City									24		46				
Keokuk	12								19		18				
Fort Dodge															
Pilot Grove	23														
Cedar Rapids	20														
Cedar Falls	22														
Murray	18														

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
ILLINOIS.															
East St. Louis	76										23				
Springfield	326	12			31				24						
Wireton Blue Island								229							
Peoria	59								23						
Granite City	218														
Chicago	909			56				470	680				19		
Libertyville	61														
West Pullman	246														
Rock Falls	186														
Clearing									49						
Joliet	54														
Hegewisch									55						
Danville		18													
Dixon	83														
Quincy									19						
Menard								65							
Thebes									26						
Sterling	225				24				19						
Maywood	18														
Geneva	13														
Waukegan	269							265				21,259			
Galena		25													
Canton	178														
Pana					18										
Galva			18												
Burnside	25														
Aurora									19						
South Bartonville								279							
De Kalb	41														
Rockford	40														
Jacksonville					24										
Moline	19														
KENTUCKY.															
Augusta	40														
Newport	49														
Louisville	333								369						
Litchfield		20													
Marion		23													

Springfield	12														
Munfordville	23														
Moreland	25														
Cynthiana	18														
Bloomfield	18														
Crab Orchard	17														
Covington	18														
Vinton	24														
Burgin	27														
Elkton	15														
Quicksand										21					
KANSAS.															
Atchison	41														
Fowler	19														
Topeka	15														
Linwood									21						
Pittsburg	21														
GEORGIA.															
Atlanta	188				80				22						
Macon					23										
LOUISIANA.															
New Orleans	141			22					224	230	35				
Baton Rouge	23														
Shreveport	46								27	23					
Lake Providence	19														
Westlake	22														
Winnsboro		25													
MISSISSIPPI.															
Greenville													22		
Vicksburg									58		32		46		
MAINE.															
Bangor					57										
Presque Isle	18								23						
MISSOURI.															
St. Louis	2,544			513				481	291		49		37		
Carthage	19														
Polo					115										
Kansas City	182	69		29				62	235						
St. Joseph	28								62						
Hamilton		26													
Springfield	19														
Randolph	18														
Versailles	18	12													

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Bil-lets.	Pole steps.	Rope.	Tacks.
MONTANA.															
Cascade	21														
Helena					23										
MINNESOTA.															
Minneapolis	84								48				22		
St. Paul	53		82							20					
Brainerd									21						
MICHIGAN.															
Milliken	19														
Charlotte	15														
Wixom	18														
Mackinaw	25														
Zeeland									28						
Charlevoix		12													
Saginaw	99	41			232				427						
Kingston		16													
Kalamazoo	91								21						
Grand Rapids	249	26	20						251						
Marquette										26					
Vassar	18														
Mendon		17													
Conklin		18													
Athens		13													
Moline		13													
Flushing	19	22													
Muskegon									43						
Ada		15													
Alma	29														
Escanaba	19														
Traverse City	18								20						
Howell	43														
Dowagiac	42														
Vermontville		17													
Birmingham	15														
Bay City	94								110	31					

Potterville		15													
Menominee									20						
Blanchard		20													
Bad Axe		15													
Wise									26						
Lapeer	19														
Milford	19														
Sturgis									20						
Swartz Creek	21														
Battle Creek	344								23						
Lansing	18														
Albion	23														
New Haven		19													
Ann Arbor		23													
Newberry	20	12													
Tecumseh	18				18										
Sault Ste Marie															
Adrian	12,595				45			76							
Cooperville	15	12													
Plainwell		38													
Saranac	15														
Plymouth		14													
Carson City		21													
Posen	13	17													
Pontiac	13														
Rochester	23	16													
Jackson	78								19						
Belleville		14													
Bellevue	19														
Perry		38													
Prescott	15														
Mount Clemens	13														
Niles	465														
Pentwater		17													
Detroit	857	15	250	26				40	107						
Laingsburg		24													
Ludington	20														
Milan	22														
Muir	28														
Vernon		20													
Sparta	18														
Hamilton	33														
Caledonia		27													
Shelby									20						
Sandfield	22														
Imlay		59													
Owosso									18						
Schoolcraft									20						
Greenville									21						
Dundee		14													
Fremont	19														
Brent Creek	23														

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
MICHIGAN—continued.															
Fowler	12														
Greenfield	18	12													
North Branch	23	17													
Sandusky	19														
Marlette	25														
Wakeley	13														
Manistique									39						
Williamston	28	21													
Lenox					38										
MASSACHUSETTS.															
Clinton	171														
Worcester						300		6,633				4,651			
Peabody									20						
Boston			38						20						
Orange			82												
Seaside								57							
Miller Falls			10												
South Boston	24		2												
NORTH CAROLINA.															
Greensboro	18														
NEW YORK.															
Buffalo	159		63					20							
Batavia	40								27						
Lockport								21							
Rochester	14														
North Tonawanda	761							38	20						
Albany	35														
Keesville								68							
Warsaw					18										
Port Kent								49							
Lancaster	13		10												
New Rochelle									19						
Blaisdell	25														

Lackawanna	22														
Cornell	7														
Elmira			8												
New York	1,072		18									32			
NEW JERSEY.															
Paterson				18											
NEW MEXICO.															
Albuquerque	44														
Carlsbad	19														
Chihuahua	18														
Magdalena	23														
NEVADA.															
Throne	25														
NEBRASKA.															
Beatrice			19												
Fremont	25								28						
Lincoln									14						
Omaha	22		25	25					122		24				
OHIO.															
Jewell		25													
Baltic		20													
Stoner		14													
Jeffersonville		17													
Delphi	17								25						
Jennesea	15														
Canton	118								75						
Chagrin Falls	57	5													
Cincinnati	236		18	18	97				166	19					
Columbus	65				22			516	121						
Chillicothe	32	13													
Columbus Grove		18						474							
Coldwater		18													
Salina	25	22													
Toledo	1,174		42	24					1,385			19			
Rosewood		12½													
Fremont		36⅞							18						
Bellevue									23						
Orrville	59														
Whitehouse		16													
Niles	44														
Batavia		14													
Leipsic									45						
Bradner	18														
Benton Ridge		19													
Suffield		22													

The Wheeling & Lake Erie Railroad Co.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Bil-lets.	Pole steps.	Rope.	Tacks.
OHIO—continued.															
Dayton	1,311		17						43						
Zanesville		31			19						26				
Brewster	15														
Sylvania		18													
Granville		21													
Spargusville		13													
Washington Courthouse	12	12													
St. Paris	20														
New Bremen	18														
Lima	18														
St. Mary								70							
Paulding		12							19						
Lockland									176						
Martland		18													
Piqua	19														
West Newton		15													
Fayette		14													
Fletcher		24													
Ashland			18												
New Alexandria	15														
Springfield	2,210	36			1,508										
New Plymouth		17													
Jamestown		18													
Wapakoneta		46						211							
Liberty Center	17														
Carroll	23														
Martins Ferry									19						
Willshire								26							
Middleport									21						
Okolona	48														
Shelby	26														
Huron		14													
South Park			605												
Edon		18													
Miamisburg		17													
South Charleston	16														
Seaman		22													

Albany		16													
Rushville		20													
Deshler		18							22						
Gallipolis		14													
Kunkle		22													
Malinta		19													
Yorkshire		14													
Tiffin				25											
Troy	20		19												
Upper Sandusky		18													
Wauseon		13							20						
Marion		22							20						
Greenville	22														
Napoleon	48														
Lakeview	14														
Hamilton	56														
Wellington	31														
Defiance	21		21												
OREGON.															
Haines					26										
Portland	21				47				52						
OKLAHOMA.															
Muskogee				18											
Oklahoma City	48		20						23						
Sapulpa	27														
PENNSYLVANIA.															
Allentown	52											4,108			
Braddock												1,699			
Beaver Falls	36														
Duffs	18														
North Philadelphia	18														
Philadelphia	26														
Wilkes-Barre								84							
Williamsport				22											
RHODE ISLAND.															
Providence								2,109							
TENNESSEE.															
Nashville	259				21				43	25	21				
Knoxville	19								113						
Memphis	421	90							189	25				60	
Portland		14													
Halls		19													
East Sparta		34													
Trenton		13													
Paris					15										

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Bil-lets.	Pole steps.	Rope.	Tacks.
TENNESSEE—continued.															
Brownsville	12				15										
Waverly		14													
Jellico										76					
Franklin	32														
Union City	18														
Whitlock		13													
Galliton	14														
Wartrace	14														
TEXAS.															
Dallas	20														
Paris	28														
Texas City	25														
Waco															19
UTAH.															
Salt Lake City	114														
VIRGINIA.															
Charlottesville	39														
Grottoes	22														
Roanoke					18										
Richmond	168														
South Norfolk	52														
Staunton									20						
WASHINGTON.															
Ellensburg					22										
Mount Vernon					22										
Seattle	23				65				20						
Spokane	23				25										
Tacoma	20														
Touchet					22										
WEST VIRGINIA.															
Charlestown	25			50						145					

WISCONSIN.															
Kenosha	855				57										
La Crosse	18														
Zanesville	27														
Marabel									27						
Milwaukee	672		13		25				313						
WYOMING.															
Hanan									28						

FISCAL YEAR ENDING JUNE 30, 1910.

ALABAMA.															
Birmingham	20								30						
Dothan	21														
Bessemer									59						
Gadsden		14													
Lockhart	20														
Pratt City										42					
Talladega	14														
ARKANSAS.															
Benton	20														
Stuttgart	37														
ALASKA.															
Treadwell			26												
CALIFORNIA.															
Los Angeles	279		130						163				18		16
San Francisco	341								83						25
Sacramento	24								140						
Emeryville											32		18		
San Diego									24						
West Berkeley					20										
CONNECTICUT.															
Georgetown								112							
Shelton	19														
Oakville	32														
New Britain	16		96												
Hartford			150												
New Haven	22							1,049				141			
Bristol			18												
Branford								56							
Bridgeport	18														

The Wheeling & Lake Erie Railroad Co.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Bil-lets.	Pole steps.	Rope.	Tacks.
COLORADO.															
Denver	231	22	103		213				149	20					
Trinidad									18						
West Cliff					18										
CANADA.															
St. Marys	18														
Rutherford	22														
Highland	29							2,425							
Hamilton	2,036							5,716							
Atwater								28							
Quincy									23						
Toronto	370			76											
Sarnia	180														
Guelph								21							
Penetangaunshene	38														
Smith Falls	23														
Owen Sound	80														
South Roxton	19														
West Toronto				28				120							
Stratford	336							29							
Woodstock	505														
St. Cunegarde								28							
Cobalt	22														
Winnipeg	42														
Ingersoll	25														
Brantford	49							493							
Swansea	210														
Dominion								240							
Hull	37														
Walkersville	2,599							150							
Lucknow	18														
Chatam	18														
Montreal	266							211							
Bowmansville								20							
St. Henry	18														
Waterville	56														

ILLINOIS.															
Granite City	122								40						
Hoopeston	193														
Chicago	1,631		418	77				76	756				18		
Chicago Heights			531	172											
West Pullman	212								22						
Rock Falls	111							476							
Rockford	179														
Peoria									67						
South Bartonsville	56							1,967							
Clearing									19						
Wireton Blue Island								416							
Madison									19						
Maywood	18														
Waukegan	29							75				57,246			
Libertyville	142														
Dixon	62														
East St. Louis				21											
Joliet					24			412							
De Kalb									27						
Grand Crossing	74														
Sterling	137														
Moline	31														
Galena	18														
Harvey	25														
Howard Junction			120												
Kensington					5										
Decatur					19										
Aurora					22										
IDAHO.															
Emmett	27														
Spencer									20						
IOWA.															
Ottumwa		50													
Des Moines	95								125						
Keokuk											18				
Fort Dodge									19						
Clinton	47														
Dubuque	21														
INDIANA.															
Crawfordsville								2,360							
Anderson												50,050			
Frankfort		12							39						
Tipton		18													
Michigan City									103						
Albany	23														
Indianapolis	694	17							206					18	

The Wheeling & Lake Erie Railroad Co.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
INDIANA—continued.															
Oakland City									19						
Kendallville	43	12													
Hammond	20														
Wyatt		20													
Terre Haute	36														
Linton										18					
Sheridan		18													
Roanoke									20						
Rensselaer		12													
Plymouth	18														
Warren		32													
Walkersville	26														
Montpelier	18	40													
Muncie	55														
Alexandria									19						
Shelbyville	18														
Greensburg	292														
Bluffton					100										
Evansville	79									18					
Bedford		14													
Marion	20														
New Albany	19														
Carmel	17	15													
Huntington		14													
Orleans	18														
Oxford	17														
GEORGIA.															
Rome		16													
Augusta					18										
Atlanta	41				19										
FLORIDA.															
Pensacola		17							25						

KANSAS.															
Galena									20						
Mulrane	32														
Logan	19														
Atchison									20						
KENTUCKY.															
Caneysville		16													
Mayfield		22													
Louisville	143	32							41						
Wingo	18														
Franklin		12													
Henderson		19													
Mumfordsville		18													
Maysville	18														
Newport	62														
Paducah				30											
LOUISIANA.															
New Orleans	94								63	86					
Alexandria		19													
Arcadia									25						
St. Joe		18													
MINNESOTA.															
Minneapolis	155														
Brainard	25														
St. Paul	94								67						
Minnesota Transfer	21		21												
St. Louis Park								31							
MISSISSIPPI.															
Vicksburg														42	
Gulfport		27													
Yazoo City		12													
Jackson	42														
MASSACHUSETTS.															
Holyoke								29							
Clinton	552														
Readville			16												
Worcester								3,059					4,519		
Mystic Wharf	15														
South Boston			28												
Armory	36		18												
Orange			18												
NEW MEXICO.															
Corona	19														

The Wheeling & Lake Erie Railroad Co.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
MONTANA.															
Belt	22														
Dillon									21						
Kallispell									21						
Helena	28				24										
Eureka									23						
Anaconda Belt	23														
Roundup	21														
Harlem					22										
Missoula					22										
Cheney					23										
Bozeman					21										
MAINE.															
Gulford									22						
Bangor									64						
Houlton					18										
Presque Isle					18										
MISSOURI.															
Polo					59										
St. Louis	2,632			1,619				337	160		33			18	21
Kansas City	217			25				28	139						40
Springfield	43														
Cabool		15													
Orongo									23						
St. Charles	22														
St. Joseph	24								22		18				
Blaisdell								39							
Crystal City				25											
Carthage	19														
MEXICO.															
Monterey	41														

MICHIGAN.															
Croswell		16													
Grand Ledge		43													
Grand Rapids	282							53	283						
Bay City	16	13			22				56						
Petoski		14													
Pontiac	19	27													
Vernon	19														
Dundee		17													
Flint	23		2,225		75										
Chelsea		21													
Ovid	20														
Dexter		13													
Sturgis	22														
Bannister		30													
Fowlerville		18													
Hand		14													
Cadillac		10							20						
Hudson		18													
Saginaw	42			27	222				42						
Albion	61														
Scottville									38						
Niles	143														
Amanda									20						
Detroit	1,291		1,442	21					177						
Carson City		18													
Kalamazoo	43														
Emmett					18										
Tecumseh	1,001														
Iron River									15						
St. Joseph	19														
Owosso	18	15							19						
Jackson	63	16			20				20						
White Clouds									20						
Pierson		12													
Adrian	6,179	18			56				19						
Martin		15													
Birmingham		14													
Port Huron	701														
Battle Creek	359														
Vicksburg		15													
Orleans		18													
Muskegon								106							
Benton Harbor	44														
Junction Yards					47										
South Rockwood		14													
Fremont		13													
Britton									21						
Coshocton		21													
Escanaba	20								19						
Dowagiac		14													
Harbor Beach									19						

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
MICHIGAN—continued.															
Clyde		13													
Howell	50														
Zeeland	13														
Middlefield		16													
Sparta		18													
Milford		18													
Hartford		20													
NEW JERSEY.															
Newark				41											
Elizabethport	25														
NEBRASKA.															
Omaha	76								87						21
Ferry	24														
Beatrice	29														
Lincoln	18														
NEW YORK.															
Brooklyn	108														
Rochester	172		20												
Tonawanda	138														
Buffalo	23								47						
Elmira									39						
Black Rock								30							
Batavia			49												
Warsaw					18										
New York City	240														
Newport			18												
Albany	26														
Canister					23										
OHIO.															
Martel		13													
Kent	185							309							
Dalton		14													

Norwalk		26													
Carroll	14														
Youngstown	46							29							
Pioneer	22	14							13						
Navarre		14													
Dresden	14														
Toledo	806			49					1,154						
St. Marys									20						
Chagrin Falls		25							18						
Sylvania		39													
Edon	18	17							29						
Cairo	25														
Fayette		13							23						
Jackson		7													
Cecil		13													
Oak Harbor		17							23						
Spencer		19													
Napoleon		43							26						
Fostoria	18							287							
Jeffersonville		17													
Cincinnati	270			46	18				21						
Columbus	171							1,337	80					23	
Fremont		49							18						
Colgate		17							21						
Kenton		16													
Marie Stern		12													
Liberty Center		17													
Rossburg		12													
Wagon Works	19														
Lockland				25					239						
Paulding									26						
Sugar Grove		13													
Orrville	55														
South Charleston		20													
Harpster		13													
McClure		16													
Delphos		19													
Zanesville					25				19						
Bellefountaine	225														
Wapakoneta	26		185					56							
Mansfield	18														
Lodi		14													
Lima									18						
Middletown			15												
Hamilton	67	23													
Minerva		26													
Sidney		12													
Ivorydale				75											
Martins Ferry	5														
Bluffton		18													
Wellington									19						
Troy	23														

THE WHEELING & LAKE ERIE RAILROAD CO. Continued.

Statement of commodities received from American Steel & Wire Co. at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.	Bolts.
OHIO—continued.																
Merideth		16														
Piqua	39															
Springfield	582	24			533				23							
Pomeroy		12														
Defiance		19							22							
Dayton	1,099		516	22					73							
Bradner		12														
Whitehouse	16															
Gallipolis		18														
Ashland	75			21												
Covington	15															
Canton	222								78							
OKLAHOMA.																
Fulsa									42							
Enid	18	12														
Oklahoma City	46															
Fletcher		23														
OREGON.																
Portland	157				223				53				18			
Haines					22											
McMinnville					28											
PENNSYLVANIA.																
Philadelphia	105							57								
Allentown	93											2,469				
Beaver Falls	23							31								
Wilkes-Barre								57								
Fallston								1,348								
Pittsburgh										21						
Scranton	49															
Braddock												4,258				
South Sharon	21															
West Pittsburgh								222								
Lebanon								48								

RHODE ISLAND.																
Providence								881								
SOUTH CAROLINA.																
Camden		13														
Anderson		14														
SOUTH DAKOTA.																
Dallas	22															
TENNESSEE.																
Memphis	183	41							142							
New Market	17															
Knoxville	22								25	22						
Nashville	151								74							
Jellico										19						
Troy	20															
Obion	19															
Marshall	18															
Binghamton									20							
Union City					23											
Chattanooga	19															18
TEXAS.																
Dallas	21														20	
Jacksonville	20															
Houston	18															
UTAH.																
Salt Lake City	221		67						22	21						
Ogden	28															
Magna			22													
VERMONT.																
Bristol	18															
VIRGINIA.																
Richmond	141								23							
Norfolk	18															
Roanoke					20											
Staunton					82											
Lexington					18											
WEST VIRGINIA.																
Charlestown				90						151						

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.	Bolts.
WYOMING.																
Lauder									20							
WISCONSIN.																
Kenosha	882															
Manitowoc		19			36											
Milwaukee	208								125							
Green Bay									58							
Racine	41															
WASHINGTON.																
Tacoma	90															
Stratford	27															
Seattle	154				44				53							
Spokane	39				47											
Granger					22											
North Yakima					45											

FISCAL YEAR ENDING JUNE 30, 1909.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.	Bolts.
ALABAMA.																
Andalusia		18														
Mobile									22	21						
Bessemer										31						
Gadsden		22														
Pratt City										21						
ARIZONA.																
Mesa	6															
ARKANSAS.																
Newport		18														
Mansfield									20							

CANADA.																
Port William		42														
Highland Station								6,895								
Hulls	41															
Hamilton	2,284							496								
Stratford	323															
New Lisheard	21															
Toronto	325			48												
Walkersville	462															
Sarnia	21															
Montreal	77							349				126				
Dominion								2,167								
Winnepeg	245															
New Market	36															
Owen Sound	74															
Petersborough									20							
Temaskaming	21															
Oshawa									19							
Collingwood								175								
Woodstock	344															
Vancouver	62															
Swansea	50															
Brantford	20															
CALIFORNIA.																
San Francisco	462				64				857				17		32	
Sacramento		47							287							
Los Angeles	147				50			88	1,178				17			
Antioch					20											
Pimole					26											
Pleasanton					38											
Chico					38											
San Jose									22							
Oakland	40								43							
Marysville									28							
Vine Hill					20											
Paraffine									162							
Stockton									23							
Oil Spur									22							
COLORADO.																
Denver	479	22	58						405	34						
Paraffine									22							
CONNECTICUT.																
Georgetown								28								
Bridgeport	36															
Bristol	25															
New Haven								28								
Waterville	21															
Waterbury	23															

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Bil-lets.	Pole steps.	Rope.	Tacks.
FLORIDA.															
Jacksonville	21														
Pensacola		15													
Tampa	18														
GEORGIA.															
Atlanta	495														
Augusta	42														
ILLINOIS.															
Rock Falls	148							225							
Rockford	94														
Silver Shops									20						
Joliet	23							55	115						
Davis Junction									23						
Freeport	57														
Granite City	131								39						
West Pullman	111								44						
East St. Louis	19			43											
Chicago Heights									19						
Sterling	119														
Aurora	30														
Riverdale	72														
Galena											23				
Elsdon									22						
Hoopeston	257														
South Chicago	23														
Quincy	20								44						
Chicago	1,450			84				51	926	19			18		
Lamont	19														
Peoria	104			22					165						
Decatur		20							44						
Roseville		18													
Dixon	179														
Waukegan	22								19			16,337			
De Kalb	183							3,609	84						
South Bartonsville								5,040							
Danville	18														
Wireton Blue Island								1,135							
Galesburg									19						

IOWA.															
Des Moines	61	23							83						
Muscatine									23						
Fifield									19						
Oskaloosa									20						
Clinton								22	92						
Cedar Rapids		34													
Scranton	18														
Marengo		15													
Washington		17													
State Center		20													
Lewiston					28										
Sioux City	18								45		48				
Council Bluffs									22						
Davenport									19						
Fort Dodge									47						
Keokuk									19						
Mason City	15														
Waterloo									24						
INDIANA.															
Albany		12													
Oxford		15													
Roanoke	21														
Swazee		33													
Evansville	88								22						
Indianapolis	559	31							278						
Avilla		19													
Rochester	27	28													
Morristown	13														
Michigan City									106						
Indiana Harbor									20						
South Bend									39						
Warren	16														
Noblesville		13													
Emison		12													
Macy		12													
Burrows		13													
Connersville		18													
Greensburg	461														
Redkey		12													
Tipton		44													
Topeka		15													
Woodburn		22													
Lafayette	108														
Frankfort		42													
Terre Haute	20	16							27	18					
Walcotville		31							46						
Portland		16													
Anterbeen		14													
Muncie	18	12													

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
INDIANA—continued.															
Marion		33													
Fort Wayne	20	19					20		102						
Fort Branch		12													
Logansport		17													
Spiceville		13													
Peru		13													
Montezuma		12													
Sullivan	18	13													
Montpelier	22														
Wakarusa		13													
Arcadia		19													
Kokomo	44														
Crawfordsville	20							3,355							
Alexandria				54											
Martinsville	19														
Covington	18	14													
Greentown		12													
Decatur		35													
Attica		16													
Rushville		26													
Kendallville	44½														
Vincennes		48													
Knightstown		12													
Huntington		14													
Anderson	148							2,545				126,042			
IDAHO.															
Coeur d'Alene									21						
Dubois	20														
Midvale									27						
Preston									20						
Twin Falls									21						
KANSAS.															
Atchison	19														
Argentine									24						
Hutchinson	22														

Kansas City									18						
Topeka									47						
Wichita									20						
KENTUCKY.															
Louisville	82	69							108						
Cynthiana									19						
Glasgow	66								25						
Carrollton		33													
Millersburg		21													
Madisonville	16														
Hodgenville		17													
Trenton		34													
Upton		16													
Franklin		211													
Shepherdsville		14													
Russellville		15													
Adairville		16													
Paducah		18		15						21					
Elizabethtown		17													
Cave City		15													
Mayfield		16													
Greensburg		18													
Augusta	77														
Lexington	40														
LOUISIANA.															
Alexandria									22						
Gretna	20														
Lake Charles										16					
Monroe		20													
New Iberia		20													
New Orleans	153								231						
Opelousas		30													
Plaquemine									25						
MISSISSIPPI.															
Columbia	22														
Gulfport		16													
MONTANA.															
Billings									23						
Butte			34												
Black Eagle									26						
Glendive									20	18					
Livingston									29						
Missoula									46						
Plaines	23														
Sunnyside	37														

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
MASSACHUSETTS.															
Clinton	78														
South Boston			20												
Waltham	29														
Worcester						2,550		281				8,601			
MISSOURI.															
Joplin									24						
Harrisonville		25													
St. Charles									32						
Clarkton		22													
St. Louis	2,965			60				85	1,098						
St. Joseph	23			36					116		60				
Carthage	29														
Carondelet							40								
Kansas City	110	84		22					39						
MINNESOTA.															
Minnesota tfr		30													
Minneapolis	155	41							24						
Hilburg									22						
Brainerd	20								122						
Duluth	60									19					
St. Paul	76		96	30						81					
MAINE.															
Bangor									192						
Portland									20						
MICHIGAN.															
Grand Ledge		32													
Saginaw	44			24	77				176						
Chesaning		13													
Escanaba	20														
Bellevue	16														
Mount Pleasant									20						
Port Huron	25							89	19						

Burlington		15													
Owosso		47													
Trenton									29						
Bradley		17													
Shelby		13													
Leslie	22														
Elsie		59													
Davisburg		19													
Lennon		22													
Bannister		32							18						
Manistee									19						
Smith Creek		16													
Williamstown	13	33													
Newburg	16														
Colon									20						
Kingston		15													
Cedar Springs		12							24						
Tyre	20														
Weidman	22														
Brighton	18														
Monroe									25						
Lemon		12													
McBain		18													
Ludington									19						
Petoskey									26						
Otisville		23													
Rochester		29													
Hazlet	21														
Adrian	10,630														
Wakelee		18													
Kalamazoo		13							99						
Onsted		18													
Fowler		18													
Sturgis		16							20						
Clarkston		14													
Martin		14													
Remus		15													
Ithaca		20													
Milliken		13													
Pontiac		18													
Milan									19						
Battle Creek	157								44						
Traverse City	58														
Ovid		24													
Union City		19													
Grand Rapids	475	70							343						
Detroit	616		25						240						
Lansing									19						
Maybee		12													
Fowlerville		13													
Allegan		14													
Dundee		13													
Alma		17							19						

The Wheeling & Lake Erie Railroad Co.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
MICHIGAN—continued.															
Tecumseh	1,640								20						
Bay City	63								124						
Flint		12			18				58						
Niles									40						
Vickeryville									20						
Sparta		13							19						
Ada		12													
St. John		33													
Newport		15													
Lenox		20													
Muskegon									66						
Wheeler		12													
Freeland		14													
Kinde		15													
Carson City									19						
Britton									18						
Jackson		71							79						
Clyde		40													
Athens									19						
Edwardsburg		15													
Linwood									25						
Marlett									24						
Perry	22	42													
New Hudson	19														
Vassar		13													
Hastings		35													
Dowagiac	25		19						43						
Clio		13													
Clarksville		24													
Dexter	18														
Tekonsha									20						
Birmingham		40													
Marshall		21							19						
Dalton		19													
Durant		13													
Grand Haven									22						
Northville		14													
Hudson		15													

Conklin		17													
Waltz		13													
West Branch		24													
Emmett		13													
Wyandotte		18													
Pigeon		12													
Lake Odessa		20													
Rapid City		18													
Concord		14													
Memphis	25														
Garland	30	28													
Pentwater									24						
Yale	20														
Pinckney		14													
Rossburg	22														
Plymouth		18													
Greenville									20						
Iona		13													
Brown City		19													
Cadillac	18	5													
Conklin		20													
Van Horne		23													
Mason		18													
St. Charles		18													
Bancroft		14													
Applegate		16													
Plainwell		29													
Holland									20						
Stanton		16													
Langsburg		35													
Bridgeport		12													
Bangor									22						
Hemlock	17														
St. Joseph									19						
Milford		23													
Zeeland	19								21						
Port Hope	23														
Barryton		13													
Freeport		21													
Everett		14													
Remus		12													
North Flint			16												
Harbor Beach	19								27						
Carlton	19														
Howell		50													
Fremont		12													
Shepherd									18						
NEBRASKA.															
Fremont									40						
Lincoln	18								55					20	
Omaha	19			28					152						

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
NORTH DAKOTA.															
Fargo	22														
Taylor	21														
NEVADA.															
Carson City					23										
NEW JERSEY.															
Elizabethport	33														
Rutherford									19						
NEW YORK.															
Batavia	69								20						
Buffalo	119								39						
Brooklyn	21			21											
Black Rock	52														
Elmira									44						
North Tonawanda	105														
Rochester	52								19						
Troy	21														
OKLAHOMA.															
Bartlesville									40						
Newkirk		16													
Oklahoma City	40								121						
Ardmore	22														
Nowata		16							23						
Hunter		19													
Purcell		18													
Lindsay		19													
Fargo		19													
Hennessey		18													
Capron		19													
Clairton		17													
Hugo		30													
Guthrie									22						

Yale		18													
Muskogee				22											
Goltry		19													
OREGON.															
Astoria									47						
Portland	41								923						
Pendleton									43						
OHIO.															
Zanesville	63	82							63						
Colon									46						
Rising Sun		26													
Bradner									20						
Jackson		5													
Minster									8						
South Columbus								29							
New Lexington	19														
Jamestown									23						
Fremont	18	91							27						
Prospect		12													
Gallipolis	27	22													
Ottawa		14													
Marengo		14													
Deshler		21													
Orrville	24														
Napoleon		42							44						
McComb		13													
Coshocton		19													
Leipsic		13	22						43						
Versailles		14													
Troy		16													
Franklin									19						
Greenfield		26													
Bremen	22														
Jewell									18						
West Unity		12													
Washington Court House	27								25						
Hamilton	27	17							58						
Corning		64													
Oxford		19													
Kunkle		22													
Edon	19								26						
Chillicothe									41						
Toledo	788		7	23					1,663						
Cloverdale	22														
Bellefontaine	845	35													
Hebron	13														
Fayette		19													
Ohio City		17													
Columbus	383							4,347							
Sedalia		30							16						

The Wheeling & Lake Erie Railroad Co.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
OHIO—continued.															
Linworth		15													
Xenia		13													
Paulding		18													
Continental		20													
Navarre		13							22						
Bowling Green	19														
Martins Ferry									18						
Fort William		13								20					
Waverly		20													
Kenton		91													
Covington	14	12							19						
Wellston	16														
McKay		13													
Lakeview															
Oak Harbor		13							18						
Mount Gilead		17							34						
Spencer	18	21													
Sidney		18													
Athens	22														
Hartville	15	13							27						
Marion		12													
Wapakoneta	19	48													
South Charleston	17							31							
Mansfield		16													
West Unity															
Sugar Creek	20								23						
West Mansfield		17													
Powell	20														
Pleasantville		40													
Carrollton		19													
Cincinnati	122								19						
Lockland															
Pomeroy		14							195						
Piqua	22														
Tarroll		20													
Granville		14													
Canal Winchester		14													
Meredith		**16**													
Findlay		**16**													

Delphos									21						
Dayton	604		202						108						
Liberty Center		13													
Delaware		13							18						
Yorkshire		15													
Lancaster		15													
Millersport		29													
Miamisburg		17													
Bidwell		13													
Cecil	13														
Canton	53								97						
Ivorydale				25											
Sandusky	17														
Jackson Center	15														
New Alexandria		15													
Springfield	854				250				23						
Ashland	18			21											
Tiffin				43											
Cleves	5														
Upper Sandusky		14													
Wauseon		12							14						
Anna		21													
Montpelier		19													
Fostoria	31							218							
St. Marys								139							
Okolona		13													
Benton Ridge		15													
Chagrin Falls		20													
Norwalk		38							27						
Lima		17							40						
Kent								15							
Greenville		15													
St. Paris		16													
Holgate		15													
Massillon		20													
Arlington		19													
Milan		25													
PENNSYLVANIA.															
Allentown											29,936				
Braddock											5,636				
Beaver Falls								448							
Conshohocken	25														
Fallston								284							
Lebanon								84							
McKees Rocks	19														
Philadelphia	49							48							
Reading	20														
Scranton	20														
Rankin		19													
West Pittsburgh								28							
Williamsport				21											

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Bil-lets.	Pole steps.	Rope.	Tacks.
RHODE ISLAND.															
Providence								270							
SOUTH DAKOTA.															
Aberdeen	18														
Mimno		15													
Nett		15													
Piedmont	19														
Pierre									19						
Rapid City	20														
Scotland		16													
TEXAS.															
Beaumont									19						
Houston	58								19						
Tuftin	23														
Franklin		42													
Dallas	44								45						
Henreitta		19													
Tranpe		20													
Frankton									20						
Snyder		18													
Herrville		62													
Austin									24						
Gladwater		24													
Del Rio	20														
Cameron		25													
Waco									21						
Victoria									20						
Kosse		20													
Denison		20													
Plano	19														
Fort Worth									21						
Canadian		19													
Paris	37								18						
Elkhardt		18													
Thornton		39													

Temple									23						
Palacias		18													
New Braunfels		17													
Jacksonville									19						
Corpus Christi									20						
Gilmer									22						
Galveston	24														
TENNESSEE.															
Nashville		28							62						
Watertown		33													
Knoxville	21								33	19					
Memphis	238	341							107						
Fowlkes	19														
Trenton		15													
Ripley		49													
Pulaski		18													
McMinnville		44													
Lewesburg	18														
Troy		19													
Paris	14														
Reves		12													
Sharon		13													
Manchester		15													
Murphyboro		27													
Brownsville		28													
Morriston		20													
Trezevant		24													
Puryear		16													
Franklin		17													
McKenzie		41													
UTAH.															
Salt Lake City	63								308						
VIRGINIA.															
Cedarville		12													
Richmond	212														
WASHINGTON.															
Marysville									22						
Aberdeen									22						
Olympia									22						
Seattle	74								658	54					
Newport										21					
Tacoma	21								144						
Everett									73						
Ballard									22						
Coalville					21										
Ellensburg					36										
Spokane					21				24						

THE WHEELING & LAKE ERIE RAILROAD CO.—Continued.

Statement of commodities received from American Steel & Wire Co., at Cleveland, Ohio, showing tons and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Wire.	Fence.	Steel.	Sulphate of iron.	Bale ties.	Pig iron.	Scrap wire.	Rods.	Nails.	Spikes.	Staples.	Billets.	Pole steps.	Rope.	Tacks.
WISCONSIN.															
Janesville	30								18						
Kenosha	494				28										
Milwaukee	643								591		32				
WYOMING.															
Cody	23														
WEST VIRGINIA.															
Wheeling							24								

Statement of tonnage received from the National Tube Co., at South Lorain, showing tons, commodities, and ultimate destination.

FISCAL YEAR ENDING JUNE 30, 1909.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
ALABAMA.																				
Birmingham	21																			
Ensley	18																			
Mobile	80																			
Montgomery		124																		
ARKANSAS.																				
Lester	31																			
Fort Smith	176																			
Texarkana	18																			
Little Rock	64																			
ARIZONA.																				
Kelvin	21																			
Globe	173																			
Bisbee	50																			
Mesa	21																			
Prescott	18																			
Clifton	86																			
COLORADO.																				
Denver	856	597																		
Delta	37																			
Cripple Creek	21																			
Pueblo	51																			
Silverton	18																			
Greeley	19																			
Minnequa	51																			
La Salle	20																			
CANADA.																				
Vancouver, British Columbia	20	116																		
Nanaimo, British Columbia	23																			
Hamilton, Ontario		379																		
Fletcher, Ontario	116																			
Calgary, Alberta	19																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Pipe.	Rails	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Slag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
CALIFORNIA.																				
Los Angeles	5,184	241																		
Oleum	75																			
Oakland	1,208																			
Sacremento	287																			
Tullerton	28																			
San Francisco	3,721	30	1																	
Monarch	180																			
McKittrick	678																			
Visalhto	21																			
Pasadena	40																			
Bakersfield	492																			
Maricopa	76																			
San Diego	706																			
Sanger	35																			
Santa Cruz	21																			
Orcutt	438																			
Riverside	27																			
Olig	25																			
Coalinga	2,238																			
Oil City	116																			
Olinda	30																			
Fresno	26																			
Monte Rio	18																			
Ontario	87																			
San Jose	106																			
Stockton	64																			
Hazelton	643																			
Marysville	22																			
San Bernardino	51																			
Bentley	22																			
Ses Quoc	144																			
Moron	382																			
Newhall	85																			

Whittier	20																			
Mountain View	26																			
Hanford	26																			
IDAHO.																				
Boise	100																			
Warden	24																			
Lewiston	42																			
Idaho Falls	20																			
Malad	20																			
IOWA.																				
Newton	19																			
Keokuk	39																			
Des Moines	167																			
Dubuque	22																			
Burlington	18																			
Odebolt	25																			
Vinton	44																			
Sioux City	248																			
Cedar Rapids	22																			
INDIANA.																				
La Fayette	345																			
Marion	105																			
Gary	47																			
Muncie	321																			
Indianapolis	110																			
Montpelier	23																			
Union City	25																			
Newcastle	136																			
Selbyville	20																			
Bluffton	18																			
Fort Wayne	19																			
Terre Haute	150																			
Notre Dame	20																			
ILLINOIS.																				
Chicago	2,106	12,154	52																	
Kewanee	481			72																
Peoria	67																			
Springfield	21	88																		
Lawrenceville	1,289																			
Hawthorne	43																			
Danville	30																			
Harvey	18																			
East St. Louis	258																			
Harrisburg	21																			
Quincy	47																			
Flat Rock	199																			
Robinson	229																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Pipe.	Rails.	Splice bars.	Scrap	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
ILLINOIS—continued.																				
Birds	166																			
Billett	79																			
Decatur	28																			
Sullivan	18																			
KENTUCKY.																				
Foster	115																			
Louisville		301																		
California	350																			
Mentor	274																			
Murray	316																			
Onconta	524																			
Augusta	295																			
Summit	219																			
Maysville	470																			
Brent	286																			
Covington	107																			
KANSAS.																				
Lawrence	21																			
Independence	397																			
Cherryvale	386																			
Wichita	460																			
Pleasanton	44																			
Hutchinson	76																			
Coffeyville	45																			
Leavenworth	78																			
Peru	19																			
Chanute	142																			
Savonsburg	101																			
Edgerton	361																			
Tyro	157																			

Caney	41																			
Neodesha	74																			
Moorehead	219																			
Kansas City	28																			
Drum Siding	71																			
Wellsville	629																			
Leloup	288																			
Augusta	27																			
LOUISIANA.																				
Oil City	91																			
Shreveport	872																			
New Orleans	236																			
Iowa	19																			
Minden	20																			
MINNESOTA.																				
Winona	18																			
Mountain Lake	24																			
Hibbings	39																			
St. Paul	88																			
Duluth	107																			
Minneapolis	511	200																		
Mankato	23																			
MONTANA.																				
Anaconda	49																			
Butte	37																			
Helena	32																			
MISSOURI.																				
Sugar Creek	3																			
Kansas City	6,055																			
St. Louis	4,358																			
Joplin	70																			
Breed	19																			
Webb City	48																			
Orango	28																			
Springfield	79	170	5																	
Crystal City	58																			
Jefferson City	31																			
St. Louis	78																			
Tyro	25																			
Kirkland	19																			
MICHIGAN.																				
Detroit	2,238																			
Crystal Falls	65																			
Flint	180																			
Grand Rapids	859																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
MICHIGAN—continued.																				
Ironwood	68																			
Lansing	287																			
Bay City	122																			
Sibley	26																			
Mohawk Mine	21																			
Kalamazoo	95																			
Battle Creek	86																			
Bessemer	28																			
Houghton	41																			
Wyandotte	16																			
Muskegon	51																			
Hancock	33																			
Ahmeek	19																			
Lapeer	29																			
Ludington	23																			
Ypsilanti	23																			
Saginaw	23																			
Ann Arbor	54																			
MISSISSIPPI.																				
Vicksburg	18																			
NEW YORK.																				
Buffalo		634																		
NORTH DAKOTA.																				
Fargo	56																			

NEBRASKA.																				
Omaha	1,357	301																		
Blair	57																			
Lincoln	61																			
McGill	43																			
Columbus	22																			
NEVADA.																				
Goldfield	80																			
Carson City	18																			
NEW MEXICO.																				
Lakewood	18																			
Portaler	19																			
Lake Arthur	30																			
Dayton	21																			
Roswell	48																			
OREGON.																				
Portland	526	106																		
Baker City	20																			
Ontario	46																			
Pendleton	21																			
East Portland		87																		
Klamath Falls	21																			
OKLAHOMA.																				
Okmulgee	49																			
Tulsa	2,300																			
Guthrie	19																			
Oklahoma City	904																			
Chelsea	481																			
Nowata	1,311																			
Avant	104																			
Sapulpa	120																			
Watkins	542																			
Barthsville	418																			
Dewey	632																			
Delaware	72																			
Chickasha	37																			
Spong	48																			
Ramona	112																			
Hallett	43																			
Copan	48																			
Morris	90																			
Cleveland	27																			
Pong	25																			
Muskogee	200																			
Sperry	51																			
Collinsville	45																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Slag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
OHIO.																				
Toledo	1,260																			
Middlebranch	694																			
Defiance	18																			
Mingo Junction	929																			
Springfield	104																			
Kansas	30																			
Canton	42																			
Dayton	75																			
Lima	75																			
Findlay	85																			
Newburg	668			95																
Cincinnati	36																			
St. Marys	42																			
Cheshere	59																			
Kingsway	22																			
Somerdale	29																			
Hebron	158																			
Millersport	145																			
Sugar Creek	3																			
Rocky Ridge	484																			
Lancaster	423																			
Ironville	47																			
Logan	729																			
Waterville	18																			
Sugar Grove	82																			
Enterprise	491																			
Marion	27																			
Union Furnace	360																			
Flagdale	50																			
Gambier	21																			
Sidney	18																			
Pleasantville	52																			
Cleveland	65																			
Thurston	154																			
Bremen	23																			

New Lexington	38																			
Bellevue	3																			
Brighton	75																			
Crooksville	18																			
Junction City	405																			
Hamden	18																			
Steubenville	5																			
Granville	19																			
PENNSYLVANIA.																				
Pittsburgh				370																
McKeesport		29			2,245	38														
Munhall				124																
SOUTH DAKOTA.																				
Yankton	37																			
Watertown	94																			
Sioux Falls	20																			
Deadwood	43																			
Aberdeen	50																			
Lead	19																			
TENNESSEE.																				
Chattanooga	51																			
Memphis	113																			
Nashville		41																		
TEXAS.																				
Houston	648																			
Markman	26																			
McGregor	39																			
Comanche	35																			
Burkburnett	31																			
San Antonio	145																			
Stafford	48																			
Austin	20	60																		
Roscoe	18																			
Brady	18																			
Dibolt	25																			
Beaumont	173																			
Dallas	146																			
Fort Worth	163																			
Port Arthur	67																			
Seguin	20																			
El Campo	22																			
Chaison	55																			
Marshall	144																			
Corsicana	19																			
Waco	38																			
Taylor	18																			
Leigh	120																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1909—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
UTAH.																				
Salt Lake City	469																			
Ogden	41																			
WYOMING.																				
Gebo	20																			
Superior	23																			
Greybull	28																			
WEST VIRGINIA.																				
Wheeling			18				32													
Sheridan	181																			
Branchland	404																			
West Hamlin	178																			
Salt Rock	358																			
Milton	180																			
WASHINGTON.																				
Aberdeen	24	50																		
Spokane	453	209																		
Tacoma	239																			
Yakima	18																			
Seattle	495																			
Vancouver	19																			
Walla Walla	32																			
Everett	21																			
Renton	29																			
WISCONSIN.																				
Oshkosh	82																			
La Crosse	95																			
Milwaukee	1,063	98	4																	
Kenosha	453																			
Appleton	65																			

Neopit	23																			
Racine	32																			
Amery	18																			
Madison	21																			

FISCAL YEAR ENDING JUNE 30, 1910.

ALABAMA.																				
Mobile	133																			
Birmingham	109																			
Montgomery	46																			
ARKANSAS.																				
Fort Smith	449																			
Siloam Springs	39																			
Rosboro	18																			
Stuttgart	27																			
Little Rock	51																			
El Dorado	18																			
Texarkana	18																			
Harrison	19																			
ARIZONA.																				
Hillside	25																			
Globe	176																			
Douglas	28																			
Bisbee	30																			
Parker	6																			
Phoenix	21																			
Clifton	225																			
COLORADO.																				
Elberta	63																			
Grand Junction	36																			
Denver	1,410	578	1																	
Colorado Springs	111																			
Leadville	18																			
Hutchkin	52																			
Lamar	25																			
Colorado City	29																			
Minnequa	42																			
Pueblo	43																			
Boulder	24																			
Rixey	42																			
Idaho Springs	18																			
Greenly	43																			
Black Hawk	19																			
Central City	18																			
La Fayette	19																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
CALIFORNIA.																				
Needles	74																			
Orcutt	269																			
Vacaville	44																			
Sesame	37																			
Porterville	22																			
Redwood City	22																			
Midway	64																			
Sacramento	274	276	8																	
Santa Paula	83																			
Berkeley	20																			
San Pueblo	26																			
Voca	71																			
Paro Robles	22																			
San Francisco	1,989	793																		
Los Angeles	8,559																			
Oakland	665																			
Hazelton	1,104																			
Moron	3,519																			
Tiogo	18																			
McKittrick	856																			
San Diego	408																			
Trinidad	21																			
Bakersfield	430																			
Coalinga	2,662																			
Lompoc	58																			
Somerset	37																			
Lio	80																			
Minnequa	18																			
Stockton	62																			
Signa	273																			
Sisquoc	144																			

Camulos	497																			
Monarch	73																			
Oil City	75																			
Maricopa	75																			
Midoil	67																			
Connon Station	29																			
Olinda	154																			
Olig	64																			
Pamonia	34																			
Marysville	30																			
Oleum	62																			
Fresno	24																			
Cuargo	20																			
San Luis Obispo	33																			
CANADA.																				
Alberta:																				
Mormville	29																			
Calgary	18																			
Manitoba:																				
Winnipeg	145																			
British Columbia:																				
Hosmer	33																			
Mission Junction	20																			
Vancouver	41																			
Quebec:																				
Mile End		784																		
Montreal		334																		
Hochelaga		237																		
Saskatchewan:																				
Moosepaw	25																			
Ontario:																				
Berlin		111	4																	
Nelles Corners	219																			
Simcoe	96																			
Wallaceburg	39																			
Delhi	24																			
Essex	136																			
Comber	60																			
Pelton	171																			
Toronto		151																		
FLORIDA.																				
Pensacola		100																		
GEORGIA.																				
Atlanta	26																			
Athens		100	4																	

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate de tination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Slag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
INDIANA.																				
Michigan City	45																			
Kokomo	18	24	2																	
Gary	183																			
Lafayette	84																			
Muncie	629																			
Anderson	46	145																		
Marion	316																			
Indianapolis	681	557																		
Union City	222																			
Fort Wayne	26																			
Elwood	5																			
Richmond	41																			
Evansville	113																			
New Castle	21																			
Laporte	19																			
Shelbyville	37																			
Connorsville	19																			
Lebanon	18																			
Hammond	131	125	1																	
Terre Haute	48																			
Crawfordsville	26																			
South Bend	21																			
IOWA.																				
Des Moines	577	63	3																	
Cedar Rapids	94																			
Sioux City	362																			
Mason City	29																			
Davenport	103																			
LeMars	23																			
Charles City	84	21																		
Dubuque	117																			

Waterloo	25																			
Marshalltown		45	1																	
Clarence	18																			
Burka	20																			
Waverly	58																			
Fairfield	27																			
Boone	20																			
Fort Dodge	50																			
Bettendorf	46																			
Clinton	18																			
ILLINOIS.																				
Blue Island	20																			
Argo	32																			
Quincy	46																			
Batavia	59																			
Flat Rock	579																			
Deerfield	18																			
Mount Carmel	39																			
Pana	19																			
Coleman		281	10																	
Evanston	33																			
Decatur	27																			
Chicago	1,941	7,460	45																	
West Chicago	137																			
Bradley	23																			
Centralia	25																			
Sandoval	603																			
Burnside		1,706	1																	
Chicago Heights	41																			
Pullman	267																			
Barnsville	1,191																			
Freeport	25																			
Alton	21																			
Danville			1																	
South Chicago	191																			
Wood River	6																			
Billet	73																			
Robinson	182																			
Peoria	606	107	11																	
Canton	108																			
East St. Louis	963	221																		
Joliet	19																			
Eola	86																			
Charleston	145		5																	
East Moline		128	3																	
De Kalb	7																			
Springfield	24	35	1																	
La Grange	41																			
Ottawa	23																			
Harvey	52	115	5																	
Feekanville	21																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
ILLINOIS—continued.																				
Birds	138																			
Jacksonville		62																		
Kewanee	1,798																			
Galva	85																			
Cairo	60																			
Bushnell	62																			
Aurora	76	205	8																	
Granite City		40																		
IDAHO.																				
Boise	269																			
Craig Junction	23																			
Gooding	20																			
Nampa	24																			
American Falls	20																			
Idaho Falls	105																			
Malad	21																			
Shoshone	24																			
Paring	18																			
Black Bear	17																			
KANSAS.																				
Wichita	590																			
Independence	1,067																			
Newton	25																			
Leavenworth	19																			
Larned	25																			
Topeka	238																			
Liberal	65																			
Kansas City	395																			
Caney	129																			
Peru	23																			

Atchison	25																			
Selma	31																			
Thayer	339																			
Deering	227																			
Earlton	18																			
Cherryvale	34																			
Petrolia	110																			
Chanute	136																			
Tyro	89																			
Fredonia	28																			
Montgomery	49																			
Frederick	21																			
Wellington	38																			
Hutchinson	133																			
Neodesha	36																			
Humboldt	205																			
Altoona	171																			
Elmdale	42																			
Lawrence	28																			
Jefferson	118																			
Coffeyville	51																			
KENTUCKY.																				
Louisville	166	201																		
Owensboro		40																		
Dayton		251																		
Ashland	23																			
Lexington		50																		
LOUISIANA.																				
New Orleans	1,029	308																		
Shreveport	2,393																			
Mooringsport	48																			
Jennings	21																			
Oil City	158																			
Tama	138																			
MISSOURI.																				
St. Louis	5,539	710	58																	
Orongo	68																			
Mount Vernon	15																			
Trenton	23																			
Carthage	20																			
Williamsville	58																			
Kansas City	2,930		21																	
Webb City	148																			
Crystal City	25																			
Purcell	28																			
St. Joseph		425	15																	
Saginaw	164																			
Columbia	21																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
MISSOURI—continued.																				
Carondelet	36																			
Bonne Terre	30																			
Carterville	166																			
Dodson	158																			
Joplin	333																			
Springfield	134	31																		
Macon	20																			
Cagle	141																			
Sheffield	24																			
MINNESOTA.																				
St. Paul	237																			
Taconite	52																			
Minneapolis	472	150																		
Colonial	20																			
Norway	1																			
Marble	46																			
New Duluth	44																			
Hibbing	107																			
Faribault	33																			
Stillwater	198																			
Rochester	48																			
St. Louis Park	93																			
Albert Lea	23																			
Minnesota Transfer	7																			
MICHIGAN.																				
Detroit	2,286	775																		
Osceola	20																			
Lansing	405	152																		

Adrian	19																			
Pontiac	77																			
Iron Mountain	40																			
Crystal Falls	42																			
Havanna	27																			
Bessemer	1																			
Lapeer	39																			
Grand Haven		36																		
Menominee	117																			
Flint	563																			
Ann Arbor	26																			
Muskegon	42																			
Wyandotte	11																			
Negaunee	11		6																	
Winona	29																			
Croswell	11																			
Battle Creek	149																			
Sault Ste. Marie	28																			
Houghton	26																			
Ironwood	73																			
Port Huron	134																			
Kalamazoo	169	76	4																	
Zeeland	18																			
Ishpeming	2	30	1																	
Bay City	134																			
Grand Rapids	829	107																		
Logan	19																			
MASSACHUSETTS.																				
Boston	29																			
Worcester		129																		
MONTANA.																				
Anaconda	25																			
Butte	160																			
Dillon	18																			
Trident	44																			
MEXICO.																				
Cananea Sonora	41																			
San Luis Potosi	34																			
NEVADA.																				
McGill	20																			
Fallon	148																			
Battle Mountain	20																			
Ely	31																			
Winnemucca	38																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
NEW YORK.																				
Rutherford	18																			
Harnell			25																	
New York	317	2,629	62																	
Buffalo	175	764																		
Cattaraugus	1,118																			
Le Roy	34																			
Black Rock		106																		
Ellensburg	25																			
Belleville	19																			
Collins	1,196																			
Lawtons	444																			
North Collins	584																			
Eden Center	429																			
Smithfield	30																			
NORTH DAKOTA.																				
Fargo	40																			
Beach	25																			
Grand Fork	18																			
NEW MEXICO.																				
Roswell	183																			
Clayton	52																			
High Rolls	35																			
Albuquerque	18																			
Santa Rita	25																			
Dexter	27																			
Clovis	57																			
Koehler	18																			
Silver City	19																			

NEBRASKA.																				
Omaha	2,251	664																		
Bloomfield	18																			
Hastings	20																			
Grand Island	18																			
Gilmore	161																			
Plattsmouth	26																			
Lincoln	308																			
Beatrice	281																			
Ord	23																			
Kimberly	28																			
OHIO.																				
Brookville	84																			
Cleveland	71																			
Newburg	85																			
Junction City	1,873																			
Lima	43																			
Bremen	208																			
Toledo	228																			
Dayton	746																			
Sidney	130																			
Sugar Creek	82																			
Fultonham	18																			
Hamilton	38																			
Canton	904	179																		
Marion	61																			
New Lexington	135																			
Dresden	1																			
Mingo Junction	24																			
Brilliant	28																			
Orrville	79							546												
Fremont								68												
Bloomingsville	22																			
Rushville	65																			
Murray City	433																			
Glouster	186																			
Oak Harbor	40																			
St. Mary	19																			
Wellsburg	3																			
Mount Perry	81																			
Piqua	37																			
Wellington	40								125											
Morgan	5																			
Findlay	110																			
Brighton		140																		
Tiffin	42																			
Zanesville		37	2																	
Springfield	82																			
Cincinnati	39																			
Columbus	105	294																		
West Carrollton		348																		

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
OHIO—continued.																				
Bango	668																			
Randolph	2																			
Warren	935																			
Crestline	55																			
Sugar Grove	470																			
Webbs	523																			
Bucyrus	46																			
Hunterdon	134																			
Somerdale	243																			
Delaware	112		4																	
Hyatts	18																			
Cygnet	18																			
Loughley	40																			
Granville	85																			
Rising Sun	32																			
Clyde	5																			
Ironville Shops									180											
Hamden	18																			
Portsmouth	32																			
Middletown	31																			
Wellston	18																			
Bowling Green	18																			
Marion	22																			
Hibron	55																			
Kachelmucker	439																			
OREGON.																				
Portland	464	421	5																	
Vale	20																			
East Portland		1,468	7																	

OKLAHOMA.																				
Coalgate	30																			
Vinita	40																			
Deleware	892																			
Haskell	411																			
Wainwright	44																			
Gage	18																			
Dewey	77																			
Frederick	30																			
Pittsburg	23																			
Lanepah	140																			
Marrietta	18																			
Hartshorne	21																			
Nowata	1,837																			
Copan	68																			
Enid	310	135	13																	
Muskogee	578																			
Okmulgee	37																			
Boynton	130																			
Ponco City	108																			
Red Fork	28																			
Valliant	34																			
Tulsa	2,586	165	16																	
Bartlesville	505																			
Watkins	921																			
Ochelata	173																			
Oklahoma City	1,437																			
Laneha	191																			
El Reno	185																			
Coffeyville	23																			
Blackwell	19																			
Sapulpa	389																			
Hunts	89																			
West Muskogee	19																			
Chelsea	536																			
Hamilton	1,160																			
Hamilton Switch	53																			
Schultes	32																			
Keifer	111																			
Morris	111																			
Ramona	402																			
Chickasha	61																			
Seminole	59																			
Ardmore	44																			
Sperry	68																			
Avant	383																			
PENNSYLVANIA.																				
Buck Mountain	39																			
Wilkesbarre	28																			
McKeesport	94										2,698										
Pittsburgh				240																
Scranton	25																			

Statement of tonnage received from the National Tube Co. at South ***Lorain****, showing tons, commodities, and ultimate destination*—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
SOUTH CAROLINA.																				
Loyalton	20																			
SOUTH DAKOTA.																				
Aberdeen	296																			
Sioux Falls	415																			
Ipswich	23																			
Artesian	24																			
Ft. Pierre	23																			
Watertown	180																			
Murdy McKenzie	34																			
Redfield	30																			
Lead	36																			
Deadwood	18																			
TENNESSEE.																				
Memphis	441																			
Nashville	92	152																		
Chattanooga	322	250																		
Binghampton		342																		
TEXAS.																				
Houston	189																			
Beaumont	492																			
West Port Arthur	293																			
Dallas	319																			
Fort Worth	411	61	2																	
Martin	24																			
Hurst	278																			
Irving	272																			
Bradley	25																			
Turners Switch	126																			
El Paso	406	794																		

Victoria	**24**																			
Bay City	23																			
Seguin	25																			
Mingus	23																			
San Antonio	239	112																		
Sweetwater	168																			
Llano	23																			
Petrolia	19																			
Lufkin	18																			
Galveston	1,468																			
Temple		52																		
Lockhart	23																			
Brownwood	24																			
Wichita Falls	78																			
Austin	29																			
Jourdanton	23																			
La Pryor	23																			
Paris	26																			
Bronte	69																			
Dalhart	24																			
Amarillo	24																			
Crystal City	31																			
Midland	24																			
Corsicana	20																			
Blairmouth	42																			
Marshall	29																			
Humble	51																			
Rochdale	18																			
UTAH.																				
Salt Lake City	1,249	299																		
Tooele	56																			
Provo	20																			
Payson	27																			
International	32																			
Lehi	27																			
Ogden	72																			
Smithfield	19																			
VIRGINIA.																				
Norfolk		172																		
Lynchburg		62	1																	
WASHINGTON.																				
Seattle	836																			
Tacoma	851																			
Spokane	689																			
Everett	145																			
Interbay	63																			
North Yakima		94	4																	
Renton	28																			
Hoquiam		93																		
McCormick	21																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1910—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
WYOMING.																				
Greybull	100																			
Superior	28																			
Cheyenne	18																			
Lander	59																			
WEST VIRGINIA.																				
Pricedall	301																			
Hurricane	23																			
Charleston	60	87																		
Wheeling					112						23									
McKorkle	39																			
Kenora		142	6																	
WISCONSIN.																				
Chippewa Falls	27																			
La Crosse	365																			
Milwaukee	3,103	74	13																	
Kenosha	1,673																			
North Freedom	25																			
Oshkosh	107																			
Sheboygan	88																			
Superior	42																			
Wausau	21																			
Racine	129																			
Rhinelander	28																			
Eau Claire	45																			
Hurley	33																			
Beloit	42																			
Maribel	18																			
Madison	18																			
Ashland	23																			
Lander	20																			
West Allis	20																			
Milwaukee Shop	38																			

JAPAN.																				
Kobe	36																			
HAWAII.																				
Honolulu	24																			

FISCAL YEAR ENDING JUNE 30, 1911.

ALABAMA																				
Birmingham	429																			
Ensley	58																			
Steinman	82																			
Fayette	61																			
Montgomery	38	403	21																	
Covington	36																			
Mertoban	9																			
Mobile	153	181																		
Haleyville	55																			
Johns	16																			
Corgy	18																			
North Birmingham		23																		
Pratt City	36																			
Readers	6																			
McMadroy	1																			
Fossil	27																			
Sipsey Siding	49																			
ARKANSAS.																				
Elmore	84																			
Huntington	27																			
Fort Smith	363																			
Little Rock	346																			
Donaldson	54																			
Etta	105																			
Walco	37																			
Malvern	85																			
Perla	86																			
Berls	28																			
Hot Springs	187																			
Bierne	49																			
Smithton	107																			
Fort Pitt	25																			
ARIZONA.																				
Douglas	26																			
Hayden Junction	159																			
Kelvin	148																			
Miami	89																			
Phoenix	86																			
Prescott	694																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
CANADA.																				
Alberta:																				
Wetaskinoin	24																			
Galgary		283	37																	
Suffield	46																			
Manitoba:																				
Winnipeg	90																			
British Columbia:																				
Nanaimo	31																			
Powell River	55																			
Vancouver	63																			
Penticton	170																			
Ontario:																				
Toronto	23																			
Dunnisville	207																			
Chatam	18																			
Vienna	93																			
Nelles Corners	350																			
Brantford	38																			
Berlin		52	8																	
Cedar Springs	346																			
Cobalt	3																			
Welland	26																			
Glenwood	75																			
Gibsonburg	21																			
Hamilton		53																		
Caladonia	19																			
Ridgetown	265																			
Sarnia	38																			
Fletcher	118																			
Onondage	48																			
Blenheim	437																			
Toronto		1,220																		

Quebec:																				
Mile End		307																		
Onvry	261																			
Sherbrook	23	908	40		2							10								
Montreal	23	442	10		18															
Merlin	351																			
CALIFORNIA.																				
Hazleton	187																			
West Berkley	43																			
Wasco	22																			
Maricopa	51																			
Sherman		98																		
Fellows	180																			
Monrovia	107																			
Midoil	1,148																			
Oil City	135																			
Moron	3,250																			
Coalinga	1,421																			
Bakersfield	298																			
Los Angeles	8,685	3,472	16																	
San Francisco	5,240	1,336	49																	
Oakland	1,886																			
Serra Madre	120																			
Olinda	62																			
Savannah	57																			
Lordsburg	50																			
Whittier	20																			
Fresno	37																			
Hairoee	23																			
Randolph	143																			
Monarch	208																			
Signa	108																			
Weed	44																			
Oxnard	291																			
Barrenavia	59																			
Marysville	20																			
Stockton	22																			
Arcadia	83																			
Santa Maria	23																			
Brawley	41																			
Guadalupe	54																			
Lyone	39																			
Monte	34																			
San Diego	717																			
Orcutt	102																			
Pomona	147																			
Sequro	86																			
Labera Spur	20																			
McKittrich	275																			
Benicia	84																			
Sacramento	556	117	8																	

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
CALIFORNIA—continued.																				
Kerto	1,004																			
Olig	42																			
San Jose	42	328	10																	
Sisquoic	730																			
COLORADO.																				
Sopris	21																			
Greely	25																			
Denver	1,154																			
Colorado Springs	67																			
Pueblo	159																			
Berwind	24																			
Victor	76																			
Hastings	46																			
Minnequa	79																			
Independence	23																			
Loveland	27																			
Florence	23																			
La Fayette	23																			
Central City	25																			
CONNECTICUT.																				
New Britton				3,756																
Greenwich	19																			
Hartford	70																			
Elmwood	40																			
Skelton	77																			
New Haven	43																			
Waterburg	38																			

DISTRICT OF COLUMBIA.																				
Washington		473																		
FLORIDA.																				
Bradentown	28																			
GEORGIA.																				
Atlanta	299	382	14																	
Augusta		36	1																	
Cave Spring	18																			
Brunswick	123																			
Macon		67	2																	
ILLINOIS.																				
Bushnell	127																			
Freeport	87																			
Glen Elm	20																			
Streator	131																			
Shelbyville	48																			
Hawthorn Shops	18																			
Burnside		590																		
Joliet	110																			
Central City	48																			
Peoria	429																			
Woodstock	20																			
Ottawa	193																			
Rockford	160																			
Springfield	75	315																		
Elmhurst	20																			
Hamilton	22																			
Kewanee	5,103																			
Chicago	8,930	12,121	85												47					
Marseilles	410																			
Westville	281																			
Kewanee	212																			
Clifford	22																			
Howard	31																			
Howley		28																		
Robinson	170																			
Seneca	32																			
Herrin	18																			
Murphysboro	24																			
Batavia	38																			
De Kalb	148																			
Aurora	86	35																		
Elgin	51																			
Advance	60																			
Lawrenceville	1,084																			
East Moline	45																			
East St. Louis	327	229	1											5							

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
ILLINOIS—continued.																				
Casey	153																			
Crystal Lake	32																			
Decatur	23																			
Oblong	83																			
Moline	179																			
Danville	155																			
South Chicago	52																			
Harvey	68																			
St. Francisville	52																			
Cairo	185	57																		
Wood River	17																			
Flat Rock	224																			
Sandoval	676																			
West Pullman	75																			
Pullman	176																			
Patton Station	34																			
Billet	5																			
Aurora	19																			
INDIANA.																				
Richmond	41																			
Lafayette	410																			
Gary	671																			
Evansville	534																			
Indianapolis	791	801																		
Hammond	101	50																		
Muncie	505																			
Plymouth	6																			
Montpelier	18																			
Shelbyville	20																			
Terre Haute		291																		
Anderson	54																			

Marion	233																			
Indiana Harbor	28																			
Kokomo	35																			
South Bend	19																			
Greentown	22																			
East Chicago	105																			
Bloomfield	338																			
Warsaw	35																			
Fort Wayne	58																			
Rushville	23																			
Union City	114																			
Elwood	3																			
Whiting	38																			
Bluffton	33																			
Columbus	19																			
Lacrosse	27																			
Michigan City	24																			
IDAHO.																				
Boise	286																			
Nampa	21																			
Wallace	93																			
Blackfoot	25																			
Elk River	140																			
Idaho Falls	25																			
Twin Falls	44																			
Sand Point	26																			
Pocatello	29																			
IOWA.																				
Fort Dodge	123																			
Mason City	96																			
Dubuque	317																			
Des Moines	970	64	3																	
Fairfield	43																			
Albia		41																		
Flint Junction		417	14																	
Sioux City	633																			
Clinton	19																			
Decorah	54																			
Newton	28																			
Cedar Rapids	39																			
Burlington	58																			
Ottumwa	29																			
Campus	27																			
Waterloo	23																			
Davenport	22	46																		
Walcott	24																			
Rockwell City	38																			
Keokuk	34																			
Dexter	29																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
KANSAS.																				
Sycamore	49																			
Topeka	207																			
Wichita	741																			
Cherryvale	55																			
Independence	669																			
Larned	56																			
Neodesha	70																			
Hutchinson	35																			
Atchison	54																			
Shayer	37																			
Caney	177																			
Tyro	56																			
Dearing	2																			
Sedan	101																			
Mulberry	24																			
Kansas City	26																			
Fort Scott	150																			
Fredonia	39																			
Chanute	63																			
Savonsburg	27																			
Galena	23																			
Fort Leavenworth	31																			
Liberal	25																			
Gas	23																			
KENTUCKY.																				
Lexington		348																		
Louisville	181	952																		
Chambers	19																			
Ashland	19																			
Wrightley	73																			
Gatliff	20																			

Paducah													25							
Stafford	28																			
Covington	18																			
LOUISIANA.																				
Muncie	31																			
Lewis	1,094																			
Shreveport	4,323																			
Mooringsport	1,037																			
New Orleans	1,337	354																		
Jennings	23																			
Slidell	30																			
Oil City	26																			
Bivian	178																			
Vinton	118																			
MASSACHUSETTS.																				
Fitchburg	26																			
Fall River	18																			
East Weymouth		90																		
Dedham		40																		
Worcester	28																			
Hexwood	23																			
Brightwood	122																			
Leominster	58																			
East Walpole													20							
Beverly		30																		
Gloucester		50																		
Whittenton		50																		
Watuppa		20																		
Groveland		215																		
Sangus Center		100																		
Boston	886																			
East Somerville		628	4																	
Bemis	48																			
MONTANA.																				
Butte	47																			
Gibson	18																			
Riceville	19																			
Kalispell	128																			
MEXICO.																				
Cananea	25																			
Chikuahua	47																			
MISSOURI.																				
Kansas City	3,038	20	25																	
Linneus	23																			
St. Louis	5,425	1,510	103										531							

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	**I** molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
MISSOURI—continued.																				
Webb City	148	62	2																	
Springfield	113	199																		
Memphis	24																			
St. Joseph	23	282	2																	
Amsterdam	42																			
Eve	63																			
Carthage	55																			
Joplin	139																			
Oronogo	34																			
Hannibal	29																			
MICHIGAN.																				
Adrian	20																			
Junction Yards	18																			
Houghton	21																			
Bay City	134																			
Lehpeming	3																			
Ishpeming	8																			
Escanaba	18																			
Newberg	21																			
Detroit	2,368	875																		
Niles		41	2																	
Del Ray	21																			
Battle Creek	157																			
Iron Mountain	8																			
Ludington	18																			
Fruitport		106	3																	
Morenci	18																			
Charlotte	20																			
Jackson		31	1																	

Ironwood	86																			
Lapeer	49																			
Kalamazoo	144																			
Trenton	63																			
Wyandotte	108																			
Sandusky	22																			
Grand Rapids	752	51	7																	
Lansing	541	181																		
Saginaw	43																			
Menominee	41																			
Flint	19																			
Ypsilanti	61																			
Norway	8																			
MISSISSIPPI.																				
Hattiesburg	19																			
MINNESOTA.																				
Duluth	225	330	4																	
Lewiston	24																			
Owatonna	27																			
Rochester	43																			
Minnesota Transfer		536	2																	
Minneapolis	1,775																			
Brainerd	26																			
St. Paul	240																			
Arco	25																			
Faribault	44																			
Albert Lea	50																			
Meriden		36	6																	
Mankato	26																			
Pipestone	23																			
Hibbing	153																			
NEVADA.																				
McGill	98																			
Fairview	43																			
NEW MEXICO.																				
Koehler	50																			
Santa Rita	59																			
Albuquerque	50																			
Clayton	26																			
Katon	25																			
Las Vegas	19																			
Lake Arthur	26																			
Roswell	140																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
NEW YORK.																				
Schenectady	159																			
Coroni	28																			
Elmira	23	182	7																	
Buffalo	699	20	29																	
Black Rock	22	665																		
Dansville	235																			
Middletown		66	2																	
Rochester	141																			
Watervliet	265																			
Long Island	130																			
Troy	51																			
Patchogue		108	3																	
Southfield	144																			
Robinson		97																		
Central Islip	39																			
Ticonderoga	19																			
Albany	111																			
Brooklyn	659																			
Bay Side		124	5																	
Rochelle	137																			
Corning			2																	
Olean	6																			
Newburg		34	2																	
Casino Beach													390							
New York	7,106	21,829	1,302																	
NEBRASKA.																				
Grand Island	28																			
Gilmore	201																			
Lincoln	332	110																		
Omaha	2,913	166																		
Scotts Bluff	87																			
Beatrice	176¾																			

NEW JERSEY.																				
Hackensack	13																			
Dundee													42							
Kearney	57																			
Newark	62																			
Jersey City	131																			
Beatrice	30																			
Bayonne	56																			
Belleville	24																			
Paterson	20												20							
Rutherford	19																			
Hamden		7																		
NORTH DAKOTA.																				
Grand Fork	21																			
Fargo	32																			
Beach	29																			
NOVA SCOTIA.																				
Glace Bay	63																			
NEW BRUNSWICK.																				
Moncton	112																			
OHIO.																				
Columbus	759	1,024	26																	
Lima	153																			
Rushville	28																			
Toledo	353		4																	
Dayton	608	200																		
Springfield	142																			
Junction City	394																			
Findlay	125																			
Youngstown	22																			
Wellington	220								932	269										
Bellefontaine		102																		
Franklin		60																		
Flagdale	226																			
Canton	57	106	6																	
Lodi	131																			
Niles				1,848																
Akron		156	4																	
Norwood	84																			
New Cumberland	1,068																			
Fremont	114																			
Hebron	76																			
Norwalk															1,165					
Clyde	134																			
Sherodsville	378																			
Leesville	280																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
OHIO—continued.																				
Bowerston	597																			
Conotton	670																			
St. Marys	26																			
Scio	294																			
Cadiz	1,328																			
Pavonia	328																			
Lancaster		190																		
Brighton	38									40										
Marion	18																			
Hyatts	21																			
Carrollton	40																			
Medina	21																			
Enterprise	19																			
Cygnet	38																			
Tiffin	30																			
Ironton	19																			
West Carrollton		80																		
Bremen	147																			
Mingo Junction	13																			
Gambier	22																			
Millersport	23																			
Sidney	167																			
New Lexington	27																			
Granville	20																			
Coopersdale	74																			
Mansfield	131																			
Thompsons Siding	85																			
Cleveland	133																			
Fairmont	10																			
Zanesville		91																		
Middletown	23																			
Chillicothe		35	3																	
Fostoria	35																			
Haydenville	78																			

Cincinnati	183																			
Bellevue	49																			
Mount Vernon	23																			
Ashland	1,383																			
Hamilton	18																			
Elmira	18																			
Killbuck	21																			
Bowling Green	59																			
Delaware	28																			
Warren	1,084																			
Litchfield	46																			
Gove	37																			
New Straitsville	34																			
OKLAHOMA.																				
Poteau	95																			
Taneha	377																			
Chelsea	486																			
Hamilton Switch	255																			
Muskogee	823																			
Nowata	742																			
Tulsa	3,645																			
Oklahoma City	2,039																			
Delaware	2,701																			
Wann	53																			
Osage	791																			
Sperry	222																			
Boynton	23																			
Ramona	776																			
Okmulgee	726																			
Avant	1,858																			
Bartlesville	2,432																			
Coalton	70																			
Colagoh	58																			
Watkins	402																			
Bells Spur	250																			
Pryer	36																			
Chelson	30																			
Chatnean	30																			
Rogers	75																			
Copan	538																			
Terlton	92																			
Lenapah	369																			
Britton	25																			
Mounds	72																			
Sapulpa	158																			
Toneka	48																			
Redford	54																			
Kufer	65																			
Hominy	36																			
Kellyville	308																			
Howden	117																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
OKLAHOMA—continued.																				
Hamilton	29																			
Coffeyville	116																			
Walter	24																			
Big Heart	134																			
Hartshorne	23																			
Fort Sill	16																			
Morris	47																			
Anderson	23																			
Wainwright	63																			
Ochelata	34																			
Blackwell	41																			
Chickasha	24																			
El Reno	26																			
Cleveland	472																			
Ardmore	24																			
Skitook	30																			
Minta Siding	49																			
Enid	109																			
Catale	147																			
Ayetta Siding	29																			
Trenton	86																			
Dewey	453																			
Vinita	129																			
OREGON.																				
East Portland		1,956	2																	
Portland	1,390	451	8																	
Ashland	85																			
Medford	88																			
Eugene	32																			
Talent	28																			
Springfield	22																			

PENNSYLVANIA.																				
Oil City	45																			
Bradford	46																			
Shinglehouse	103																			
Philadelyhia	398																			
Sharon			7																	
West Liberty		21	1																	
West Pittston	54																			
Munhall				27																
Sharon		295																		
Pittsburgh	1,387			148							202					103				
McKeesport	6,563					2,646										8,018				478
Scranton	192																			
Versailles																	140			
RHODE ISLAND.																				
Woonsocket	22																			
Auburn	627																			
SOUTH DAKOTA.																				
Aberdeen	594																			
Sioux Falls	415																			
Fort Pierre	30																			
Watertown	175																			
Deadwood	24																			
Groton	28																			
Ipswich	23																			
SOUTH CAROLINA.																				
Greenville		54																		
Simpsonville	18																			
Spartesburg	23																			
TENNESSEE.																				
Delhart	23																			
Harold	50																			
Nashville	242																			
Memphis	950	369	23																	
Chattanooga	199	75																		
Johnson City	27																			
Etowak	33																			
Knoxville	72																			
Dayton	18																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
TEXAS.																				
Van Horn	27																			
Hillsboro	25																			
Seymour	25																			
Amarillo	29																			
Delson	28																			
Humble	220																			
Trinity	54																			
Brenham	24																			
Wichita Falls	64	44	2																	
Marlin	54																			
Fredericksburg	24																			
Fort Worth	598																			
Dallas	1,662																			
San Antonio	929																			
Commerce	25																			
Asherton	25																			
Beaumont	1,453																			
Sweetwater	28																			
Galveston	569																			
Houston	48																			
Waco	113																			
Bowie	23																			
Austin	50	21																		
Sherman	275																			
Burdock	37																			
Bradley	24																			
Bonham	25																			
Alba	23																			
Wanabachie	25																			
Saratoga	38																			
Victoria	73																			
Marshall	23																			

UTAH.																				
Salt Lake City	918																			
Hyde Park	38																			
Park City	108																			
Ogden	167																			
Gunnison	24																			
Manti	25																			
Magna	59																			
VIRGINIA.																				
Norfolk		160																		
VERMONT.																				
Poultney		48	2																	
WYOMING.																				
Casper	85																			
LeRoy	30																			
Laramie	30																			
Fort D. A. Russell	39																			
Superior	23																			
Rock Springs	24																			
WASHINGTON.																				
Raymond	42																			
Greenacres		251																		
Cosmopolis	81																			
Suten Bay	177																			
Seattle	625																			
North Yakima		84	3																	
Hillyard		501																		
Tacoma	437																			
Spokane	393	385	3																	
Clear Lake	20																			
Everett	105																			
Ellensburg	24																			
Walla Walla	21																			
Centralia	26																			
Belchen	20																			
Vancouver	61																			
Olympia		97	7																	
Aberdeen	45																			
WISCONSIN.																				
Zanesville	2																			
Appleton	57																			
Superior	82																			
Milwaukee	3,735	200	28																	
La Crosse	432																			

Statement of tonnage received from the National Tube Co. at South Lorain, showing tons, commodities, and ultimate destination—Continued.

FISCAL YEAR ENDING JUNE 30, 1911—Continued.

	Pipe.	Rails.	Splice bars.	Scrap.	Molds.	Skelp.	Bolts.	Stag.	Ashes.	I molds.	Castings.	Spikes.	Sulphate of iron.	Flue linings.	Pig iron.	Blooms.	Spelter.	T spans.	Pipe fittings.	Ingots.
WISCONSIN—continued.																				
Kenosha	4 050																			
Baraboo	18																			
South Milwaukee	19																			
Hudson	142																			
Oshkosh	93																			
Waukesha	18																			
Horicon	47																			
Green Bay	56																			
Meenah	24																			
Sheboygan	63																			
Evansville	18																			
Racine	118																			
Mosinee	23																			
Near Sparta	24																			
Eau Claire	103																			
Port Washington	18																			
Bloomer	24																			
Merrill	23																			
WEST VIRGINIA																				
McCorkle	688																			
Bellington	18																			
Wheeling	430											213						5	21	38
Benwood	34																			
Upper Falls	20																			
Pricedale	125																			
Cooper	37																			
Sheridan	65																			
Charleston	233																			
Cedar Grove	48																			
Bluefield	20																			

Mr. Gardner. What is the connection of those just presented with the present discussion?

Mr. Wooley. It was to show the volume of business received by the various railroads intersecting with the Steel Corporation roads.

Mr. Gardner. The volume of steel business?

Mr. Wooley. Yes, sir.

Mr. Young. From the Steel Corporation?

Mr. Wooley. Yes, from the Steel Corporation plants.

The Chairman. We have the mileages, the divisions, the rates, and the amounts of tonnage over them. That makes the matter complete.

STATEMENT OF G. M. FREER—Continued.

The Chairman. Have you finished, Mr. Freer?

Mr. Freer. I believe not.

The Chairman. Proceed.

Mr. Freer. The next statement is of the Elgin, Joliet & Eastern. It shows the local tons handled by the Elgin, Joliet & Eastern, and the tons shipped by the Illinois Steel Co. Of the total tonnage handled 62.8 per cent was Illinois Steel Co. business. That is for the year ended June 30, 1910.

The statement referred to is in the words and figures following, to wit:

Chicago, *January 15, 1912.*

Query 1. The statistics showing the total tonnage on all freight moved over the lines operated and controlled by said Elgin, Joilet & Eastern Railway Co. for the fiscal year ending June 30, 1910.

Answer. 21,671,111 tons, not including "company material." This means that no fuel, ties, rails, or other freight used exclusively by the Elgin, Joliet & Eastern Railway is included in the above figures.

Query 2. The statistics showing the total tonnage of freight received by said Elgin, Joliet & Eastern Railway from connecting lines destined for the mills or plants of the United States Steel Corporation or its subsidiary companies located upon the line of said Elgin, Joilet & Eastern Railway Co. for fiscal year ending June 30, 1910, showing character of said tonnage, whether raw materials or finished products.

Answer. No records are kept showing the tonnage received and forwarded by all of the subsidiary companies of the United States Steel Corporation. Their shipments are handled and recorded the same as any other shipments passing over the Elgin, Joliet & Eastern road. We do, however, compile an annual statement showing the tonnage received by the Illinois Steel Co. and forwarded by the Illinois Steel Co. These figures are as follows:

	Twelve months ending June 30, 1910.	Twelve months ending June 30, 1911.
	Tons.	*Tons.*
Total tons of freight received by the Illinois Steel Co. (all plants combined) via the Elgin, Joliet & Eastern Road, and which freight originated on connecting lines of the Elgin, Joliet & Eastern road	3,466,684	2,667,636
Total tons of freight received by the Illinois Steel Co. originating at stations on Elgin, Joliet & Eastern road	6,085,470	5,577,646
Total tons of freight shipped by the Illinois Steel Co. via the Elgin, Joliet & Eastern road and destined to points on connecting or foreign lines	3,122,757	1,675,661
Total number of tons shipped by the Illinois Steel Co. to local stations on the Elgin, Joliet & Eastern road	3,881,782	3,410,116
Total received and forwarded	16,556,693	13,331,059
Less the tonnage handled between works of the Illinois Steel Co. located on the Elgin, Joliet & Eastern road, and which figures are included both in the forwarded shipments and in the received shipments	2,938,693	2,409,012
Making the net total tonnage	13,618,000	10,922,047

No statistics are kept showing whether the shipments were rails, angle bars, tie plates, bolts, or nuts or the various articles manufactured by the Steel Co.

Query 3. Statistics showing the total tonnage of freight for local and connecting line movement received from the mills or plants of the said United States Steel Corporation or its subsidiary companies located upon the lines controlled or operated by said Elgin, Joliet & Eastern Railway Co. for fiscal year ending June 30, 1910, showing the character of said tonnage, whether raw materials or finished products.

Answer. The answer to this query was given in answer to query 2.

Query 4. Statistics showing the other tonnages of freight originating upon its said line received by the Elgin, Joliet & Eastern Railway Co. for transportation over its line or lines controlled or operated by it, destined for delivery upon its said lines or for further transportation beyond its lines other than the information as suggested in the foregoing paragraphs for the year ending June 30, 1910, showing separately the tonnage so received for delivery upon the lines of the said Elgin, Joliet & Eastern and the tonnage going to connecting lines beyond the lines of the said Elgin, Joliet & Eastern Railway.

Answer.—

	Twelve months ending June 30, 1910.	Twelve months ending June 30, 1911.
	Tons.	*Tons.*
Total tonnage of freight originating on the Elgin, Joliet & Eastern road and destined to points on the Elgin, Joliet & Eastern road, exclusive of Illinois Steel Co.'s shipments	2,730,390	2,374,567
Total tons of freight originating at stations on the Elgin, Joliet & Eastern road and delivered to connecting lines, exclusive of Illinois Steel Co.'s shipments	2,076,015	1,635,084
Total number of tons received from connecting lines destined to stations on the Elgin, Joliet & Eastern road, exclusive of Illinois Steel Co.'s shipments	1,394,963	1,216,635
Total tons of freight received from one connection of the Elgin, Joliet & Eastern road and hauled by the Elgin, Joliet & Eastern road over its lines and delivered to another connection of the Elgin, Joliet & Eastern road, exclusive of any shipments of the Illinois Steel Co	1,851,743	2,228,059

Query 5. Statistics showing the freight tonnage originating upon the Elgin, Joliet & Eastern Railway Co. upon the lines controlled or operated by said company for the fiscal year ending June 30, 1910, not included in the information called for in the preceding paragraphs and destined for delivery on the lines of said company or for further carriage over connecting lines.

Answer. The answer to this query was given in answer to the preceding question.

Query 6. To produce the annual reports of the Elgin, Joliet & Eastern Railway Co. to its stockholders for the years 1910 and 1911.

Answer. We make no annual report.

The CHAIRMAN. Is the tonnage there that originates at the Gary plant?

Mr. FREER. Not by plants. It is just the tonnages of the Illinois Steel Co.

Mr. GARDNER. The other 27 per cent is outside business?

Mr. FREER. Yes, sir.

Mr. GARDNER. And has nothing to do with the Steel Corporation?

Mr. FREER. Nothing to do with it, either coming in or outbound. There is one more, the Bessemer & Lake Erie. For the year ended June 30, 1910, the total net tons handled was 14,858,827, out of which 71.1 per cent was United States Steel Corporation tonnage.

The statement referred to is in the words and figures following, to wit:

Bessemer & Lake Erie Railroad Co. tonnage statistics for fiscal year ended June 30, 1910.

	Commodity.	Class.	Net tons.
Traffic to or from subsidiary companies of United States Steel Corporation.	Raw materials	Outbound	533,025
		Inbound	8,889,941
	Finished and semifinished materials.	Outbound	888,230
		Inbound	82,504
		Local	176,542
Other business	Various commodities	Interline	2,617,337
	do	Local	1,671,248
Total			[1] 14,858,827

[1] Includes Bessemer & Lake Erie Railroad Co. supplies.

Correct:

J. McKalip, *Auditor.*

Mr. Gardner. These figures are on the weight and not on value?

Mr. Freer. This is on weight. There is nothing there as to the revenue.

Mr. Gardner. I presumed so.

Mr. Young. Do you know what material otherwise is handled over that road? Is it mostly general merchandise?

Mr. Freer. There is no ore as I understand it. It is general merchandise. I think the only ore the Bessemer & Lake Erie now handle is steel corporation ore.

Mr. Young. Then that would be material of a great deal more value to the ton than the material which it handled for the steel corporation?

Mr. Freer. I would understand it would be a higher class business; yes, sir.

Mr. Young. And therefore the income received from it would be considerably higher per ton?

Mr. Freer. The income per ton would undoubtedly be higher.

Mr. Gardner. These figures would be affected by that and by the passenger service, showing to what extent that was or was not purely a plant facility. I suppose it is perhaps impossible to make any calculation to show what the percentage of the revenue was as between these kinds of service.

Mr. Freer. These reports were furnished the committee. I had nothing to do with them. They do not have any information on them from which you could figure the revenue.

The Chairman. Do you know to what extent the passenger service is for their own employees?

Mr. Freer. On the Bessemer & Lake Erie?

The Chairman. Yes.

Mr. Freer. I do not know.

Mr. Reed. I can answer that as to the Bessemer road. Practically no part of it is in the carriage of employees of the Steel Corporation to and from the steel works.

The Chairman. How about the Union?

Mr. Reed. I am not sure about that. The number of passengers carried by the Bessemer in 1910 one mile was 23,800,000, the revenue from passengers carried was $350,000.

The Chairman. Now, as to the Union?

Mr. Reed. I have not the same figures for the Union, but the Union's passenger business is quite small.

The Chairman. Is it not to a great extent its own employees, Mr. Reed?

Mr. Reed. A large part of the Union's passenger business is employees of the Steel Corporation. I am told they carried about 238,000 passengers on the Union last year.

Mr. Gardner. Irrespective of mileage?

Mr. Reed Irrespective of mileage. I ought to add to those Bessemer figures that the number of passengers carried in 1910 was 1,110,289.

The Chairman. Is there anything else the members of the committee care to ask Mr. Freer?

Mr. Young. Yes, I have some questions, if we are going on now.

The Chairman. We will finish with Mr. Freer to-day.

Mr. Young. To go back to this Lake situation, you gave some figures indicating the profits of the steamship lines were 15 or 16 per cent for 1910. Can you tell me what was charged up against the gross receipts, so that that balance was struck? What were the items of the cost of doing the service that were deducted from the gross receipts before you got that balance showing a profit of 16 per cent.

Mr. Freer. All I can give you is this statement which was furnished by the committee to me, which shows operating expenses $6,710,898, leaving a balance of $3,659,313.

Mr. Young. Then there is nothing but operating expenses charged up?

Mr. Freer. There are other expenses shown here; yes, sir—that is, other charges, not expenses.

Mr. Young. That is what I wanted to know; what they are?

Mr. Freer. There is an item of $648,899 and some cents, for interest; there is an item of $993,729.99 for depreciation, extinguishment funds, bond sinking fund, extraordinary replacements, and so forth.

Mr. Young. Are those all?

Mr. Freer. Those are all; yes, sir.

Mr. Young. Did you deduct all those before you struck a balance and found 16 per cent?

Mr. Freer. I will have to figure that again to see. I don't remember how I figured it.

I took the net earnings, practically two and a half million, before arriving at which all operating expenses had been taken care of, the interest charges, depreciation, extinguishment, and so forth. Those had all been deducted before arriving at this two and a half million. To the two and a half million I added back $649,000, approximately, interest charges. I then applied that total to the total capital stock and bonded debt.

Mr. Young. So that you deducted depreciation and operating expenses?

Mr. Freer. Extinguishment funds, bond-sinking fund, extraordinary replacements, and operating expenses.

Mr. Young. Do you know what the ordinary length of life of one of those steel ore carriers of the Lakes is?

Mr. Freer. I do not; no, sir.

Mr. Young. Do you know what the amount of depreciation deducted there was?

Mr. Freer. I do not know what the amount was. It is all embraced in one item. That is, these several items—depreciation, extinguishment, and so forth, are all combined in one item. I do not know how it would be separated.

Mr. Young. Have you the figures for the year 1908?

Mr. Freer. No, sir. This is just for one year, 1910.

Mr. Young. Have you the figures for the year 1911?

Mr. Freer. No, sir.

Mr. Young. Have you the figures for any year besides 1910?

Mr. Freer. No; no other year except 1910.

Mr. Young. These you say were furnished by the committee?

Mr. Freer. Furnished to the committee and handed me.

Mr. Young. Was this year all that was asked for?

Mr. Reed. This one year was all that was asked for.

The Chairman. The request was made to make it as specific as possible because of the time required to make these tabulations. If we had asked for several years we could not have got it in time to be of use for the committee.

Mr. Reed. I am sorry I did not know that, Mr. Chairman.

Mr. Gardner. Is 1910 a fair average year?

The Chairman. Yes.

Mr. Young. That was the greatest year of tonnage they ever had.

Mr. Reed. The earnings, for instance, of the ore-carrying roads of the Northwest were 40 per cent greater in 1910 than in any other year.

Mr. Young. It seems to me these figures are not of very much value unless they could be extended a few other years.

The Chairman. Did this steamship company in 1903 pay 19 per cent dividends?

Mr. Reed. I do not know.

Mr. Young. Have you figured for 1907?

Mr. Freer. No, sir.

Mr. Young. You have not any figures——

Mr. Freer (interposing). Except for this one year, 1910.

Mr. Young. You gave the rate on ore from the Baraboo district to Chicago. Over what railroad does that go?

Mr. Freer. The Chicago & Northwestern.

Mr. Young. That road runs through a rich farming and lumbering district and carries a large amount of general freight.

Mr. Freer. It does; yes, sir.

Mr. Young. It is not an important ore road?

Mr. Freer. I would not call that particular section a lumber district, but it does reach a very rich lumber district in other sections.

Mr. Young. Further on?

Mr. Freer. Yes, sir.

Mr. Young. So it carries general freight?

Mr. Freer. Yes, sir.

Mr. Young. In a very large amount?

Mr. Freer. A large volume of general freight.

Mr. Young. The ore business is a small part of its traffic?

Mr. Freer. I have not the figures, but I would say probably very small.

Mr. YOUNG. Would you think a comparison of rates on that line, for instance, was fair with rates on a road, we will say, like the Iron Range?

Mr. FREER. The rates generally on that road—I would say no.

Mr. YOUNG. Would it be fair to make a comparison between the ore rates on a road like the Iron Range, built entirely for the ore traffic, practically speaking, and the rates on ore of the Northwestern, which did a large general business?

Mr. FREER. No, sir; I would not think so.

Mr. YOUNG. No.

Mr. FREER. I would think, however, Mr. Young, that it would be a fairer comparison when you come to ore rates on the Chicago & Northwestern in upper Michigan regions than it would with this Baraboo rate.

Mr. YOUNG. Yes. Do you know about the general business that is carried on that Northwestern line which runs from Powers to Watersmeet, or from Powers down to Escanaba, over which the freight is carried?

Mr. FREER. No, I do not.

Mr. YOUNG. You know there is a considerable amount of general business there?

Mr. FREER. I would assume that; I do not know it.

Mr. YOUNG. You do not know the extent of it?

Mr. FREER. No, sir.

Mr. YOUNG. I think you did not give the rate on the Marquette & Western Railroad, on ore.

Mr. FREER. I have not that. I am under the impression that the rate is 30 cents.

Mr. YOUNG. Do you know how long that haul is?

Mr. FREER. No; it is very short.

Mr. YOUNG. About 15 or 18 miles?

Mr. FREER. I would say under 20 miles.

Mr. YOUNG. Yes. Did you have the rates on the Duluth, South Shore & Atlantic?

Mr. FREER. No.

Mr. YOUNG. Do you know what that rate is?

Mr. FREER. I do not.

Mr. YOUNG. Or what the length of the haul is?

Mr. FREER. No, sir.

Mr. YOUNG. So you could not make those comparisons?

Mr. FREER. No, sir.

Mr. YOUNG. I think you stated you knew nothing yourself and had no information as to the cost of the present value, the cost of replacement of either the Iron Range or the Messabe & Northern?

Mr. FREER. No, sir.

Mr. YOUNG. You have received no information on that?

Mr. FREER. None at all.

Mr. YOUNG. About these dock charges at Conneaut and other Lake ports, those dock charges are included in the Lake freight rates, or the rail rates, in every instance, are they not?

Mr. FREER. Yes; one portion in the Lake rate and a small portion in the rail rate.

Mr. YOUNG. So that they are a matter of no consequence to the shipper except as they may influence the amount of his Lake and the amount of his rail rate.

Mr. **Freer**. That is correct; yes, sir.

Mr. **Young**. What division is made there is of no consequence to him?

Mr. **Freer**. I understand not.

Mr. **Young**. When you figured this profit of 24 cents a ton on the Lake vessels, had you deducted the 15 cents which they pay to the dock companies, the amount which you stated was 15 cents a ton?

Mr. **Freer**. I assume that has been deducted. I am simply taking these figures which they have furnished.

Mr. **Young**. You assume that is part of the operating expense?

Mr. **Freer**. I assume either that it is a part of the operating expenses or that when they report their revenue they have first deducted what payments come out of the revenue.

Mr. **Young**. You know nothing about it?

Mr. **Freer**. No; I know nothing except these figures.

Mr. **Young**. That is all.

Mr. **Bartlett**. Mr. Chairman, as to this section that Mr. Reed has called attention to, this part of section 15, which reads:

> If the owner of property transported under this act directly or indirectly renders any service connected with such transportation, or furnishes any instrumentality used therein, the charge and allowance therefor shall be no more than is just and reasonable, and the commission may, after hearing on a complaint or on its own initiative, determine what is a reasonable charge—

That is a separate and distinct proposition from what is known as the commodities clause, and seems to me applies where the charges are made by parties who owned the property and owned the instrumentalities, as, for instance, where a fruit shipping company is owner both of the fruit and of the cars in which it is transported, and that the railroads should only charge a reasonable rate for that service, and that where the parties did their own terminal service, such as cartage, movement on side tracks, and things of that sort, that the railroad should not be permitted to charge something extra for that service.

Mr. **Young**. Only what was reasonable.

Mr. **Bartlett**. Only what was reasonable.

Mr. **Young**. What was Mr. Reed referring to?

Mr. **Reed**. It was in that connection I read the section.

Mr. **Bartlett**. Where an industrial corporation owns a railroad and charges these unreasonable rates, that section it occurs to me would not reach it.

Mr. **Young**. Would not that be an instrumentality, the transportation it refers to there, which could only have a reasonable rate?

Mr. **Reed**. That is the construction the Interstate Commerce Commission itself puts on that clause.

Mr. **Young**. It seems to me it would include that as much as a car of fruit which the company has.

The **Chairman**. It seems to me, as Mr. Bartlett has said, that where in the operation of a single shipment the carrier does some part of the service and the shipper does another part of the service, where the carrier and the shipper are two distinct persons, then neither the carrier shall extort from the shipper nor the shipper from the carrier. But it does not refer to a case where the carrier and the shipper are identical.

Mr. **Young**. The very case we are considering is where the shipper and the carrier are not identical, but where the shipper collects the cars, for instance, through his terminal roads, and delivers them to the shipper.

The CHAIRMAN. By identical I mean where they are different corporate persons, but are the same interested individuals. A, B, and C form themselves into a carrier, and A, B, and C form themselves into an industrial. They are known as a common carrier under one corporate name and as a manufacturer under another corporate name, but the beneficiaries are identical.

Mr. YOUNG. I claim there is no disagreement there; I agree with you on that proposition.

The CHAIRMAN. That is the case we are driving at.

Mr. YOUNG. But the case we are talking about is where a manufacturer owns some sort of a terminal railway and he performs some service in transportation by that terminal railway. Now, then, it would seem to me that this section which has been quoted would apply exactly to that case.

Mr. BARTLETT. There is another section in here which deals with terminal railroads and other facilities.

Mr. YOUNG. And that would cover the case—reasonable compensation for the service; no more.

The CHAIRMAN. Is there anything else to be asked of Mr. Freer? If not, we are very grateful to you, Mr. Freer, for your very valuable and explicit testimony.

Mr. FREER. I will file the memorandum of those distances this afternoon.

Mr. YOUNG. You will, of course, put in all those distances?

Mr. FREER. Distances and divisions to all those points.

(The memorandum referred to is in the words and figures, following to wit:)

From Union R. R. stations in Pittsburgh district—	Miles.	Division of rate.
To East St. Louis, Ill., via Wallace Junction and Cleveland:		*Per cent.*
Union R. R. and Bessemer & Lake Erie	154	24.2
New York, Chicago & St. Louis Ry. and Cleveland, Cincinnati, Chicago & St. Louis Ry	627	75.8
To Chicago, Ill., via Wallace Junction:		
Union R. R. and Bessemer & Lake Erie	154	33.3
New York, Chicago & St. Louis Ry	421	66.7
To Buffalo, N. Y., via Butler, Pa.:		
Union R. R. and Bessemer & Lake Erie	48	55
Buffalo, Rochester & Pittsburgh Ry	243	45
To Buffalo, N. Y., via Wallace Junction, Pa.:		
Union R. R. and Bessemer & Lake Erie	154	64.9
New York, Chicago & St. Louis Ry	102	35.1
To New York, N. Y., via Butler, Pa., and Buffalo, N. Y.:		
Union R. R. and Bessemer & Lake Erie	48	[1] 15
Buffalo, Rochester & Pittsburgh Ry. and New York, Chicago & Hudson River R. R	681	85
To New York, N. Y., via Erie, Pa., and Buffalo, N. Y.:		
Union R. R. and Bessemer & Lake Erie	168	[1] 24.1
Lake Shore & Michigan Southern Ry. and New York, Chicago & Hudson River R. R	526	75.9
To Boston, Mass., via Butler, Pa., and Buffalo, N. Y.:		
Union R. R. and Bessemer & Lake Erie	48	[1] 15
Buffalo, Rochester & Pittsburgh Ry. and New York, Chicago & Hudson River R. R	740	85
To Boston, Mass., via Erie, Pa., and Buffalo, N. Y.:		
Union R. R. and Bessemer & Lake Erie	168	[1] 22.4
Lake Shore & Michigan Southern Ry. and New York, Chicago & Hudson River R. R	585	77.6

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[1] Union R. R. gets arbitrary of 1 cent per 100 pounds. Balance of rate divides on above percentages.

From South Chicago, Ill.—	Miles.	Division of rate.
To Kansas City, Mo., via Joliet, Ill.:		*Per cent.*
Elgin, Joliet & Eastern Ry.	57	25
Chicago & Alton Ry.	445	75
To East St. Louis, Ill., via Joliet, Ill.:		
Elgin, Joliet & Eastern Ry.	57	25
Chicago & Alton Ry.	243	75
To New Orleans, La., via Matteson, Ill.:		
Elgin, Joliet & Eastern Ry.	35	15
Illinois Central R. R.	539	85

Mr. BARTLETT. Are you familiar with the present interstate commerce law, not as a lawyer?

Mr. FREER. Not as a lawyer. I would hesitate to say I was familiar with it. I have read it and have had some sections of it called to my attention pretty forcefully.

Mr. BARTLETT. Can you make any suggestion as to how Congress could remedy these evils that you have suggested? Of course we have got to do that if we can do so.

Mr. FREER. I do not feel competent, Judge, to make such a recommendation, except that I agree with the suggestion which the Interstate Commerce Commission itself has made to separate those—in other words, that the intent of Congress in passing the commodities clause was to do that. But they cover one side of the question only. It seems to me just as important to cover the other end of that. You prohibit a railroad company, for instance, from having an interest in an industrial, so why not prohibit an industrial from having an interest in a railroad company?

Mr. BARTLETT. That could only be done, as it was attempted to be done, and a House bill did contain it, namely, a provision which prohibited one railroad owning stock in another, or to let the Government supervise the issuance of stocks and bonds, or to prevent one railroad owning stock in any other concern, and confine it simply to a transportation business.

Mr. FREER. Yes, sir.

Mr. BARTLETT. But we ran right up against the proposition which the commission, which is investigating that question, pointed out, whether or not this Congress has any such power. If it has not we can only do it by submission of the question to the vote of the people, which as far as I am concerned I am not ready yet to do.

The CHAIRMAN. I have always believed, and have always contended, that the omission of some such provision in the commodities clause in the interstate commerce act was an oversight.

Mr. BARTLETT. Not an oversight. It was thought of, but it was a doubt whether Congress had any such power. It is a doubt which has not yet been removed from my own mind, after a somewhat careful study of the matter. I took the position and I have not departed from it that Congress did not have any power to regulate the issuance of stocks and bonds.

The CHAIRMAN. I do not mean that.

Mr. BARTLETT. And in that I have been sustained by this very learned commission which is investigating the question.

The next question is whether Congress can go into the various States and say that a State that charters a corporation to manufacture steel and iron, or sugar, or cotton, can say that that corporation shall not own any controlling interest in the stock of a railroad, which is also chartered by the State, simply because the railroad engages in interstate commerce.

And you come back at last to the proposition whether Congress can legitimately prohibit the carriage of legitimate interstate commerce. In other words, whether a railroad which is engaged in carrying commodities from one State to another can be prohibited by Congress from carrying any sort of commerce which is not injurious in itself, like a lottery ticket, but which injuriously affects the public morals. Of course I know that the Supreme Court in the Lottery case (188 U. S.) decided that in the case of a lottery ticket—and that is the language of the Supreme Court—Congress could prohibit its carriage. That was almost an even division of the court, Judge Harlan saying in the opinion that it decided nothing more except that in the case of a lottery ticket Congress can prohibit its transportation.

I have never yet brought my mind to the conclusion that the Congress could prohibit legitimate commerce, whether carried on by a corporation or an individual, and I would dislike very much to see the Supreme Court uphold any such power in Congress, because it would turn over to Congress the right, as Senator Beveridge said on the floor of the Senate, to prohibit the transportation of milk moving interstate, for instance. That is the extent to which you have got to go if you give Congress full power to prohibit legitimate commerce, and I am old-fashioned enough in my views to believe that we have not yet that power.

The CHAIRMAN. What I was speaking of was this, that if Congress has the power to say, and it has said, that a railroad shall not hold and operate coal mines, for instance, by the same token it has the right to say that coal mines shall not own and operate a railroad.

The committee will stand adjourned until tomorrow at 2 o'clock.

Whereupon, at 1.15 o'clock p. m., the committee adjourned until tomorrow, Wednesday, March 13, 1912, at 2 o'clock p. m.

No. 56

UNITED STATES STEEL CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

WEDNESDAY, MARCH 13, 1912

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

UNITED STATES STEEL CORPORATION.

Committee on the Investigation of the
United States Steel Corporation,
House of Representatives,
Wednesday, March 13, 1912.

The committee met at two o'clock p. m., Hon. Augustus O. Stanley (chairman) presiding.

The Chairman. The committee will come to order.

STATEMENT OF JOSEPH WOOD.

The witness was affirmed by the chairman.

The Chairman. Mr. Wood, what position do you hold with the Pennsylvania Railroad?

Mr. Wood. I am first vice president of the Pennsylvania Co.

The Chairman. Are you connected in any way with the Pennsylvania Railroad?

Mr. Wood. No, sir.

The Chairman. What relation has the Pennsylvania Co. to the Pennsylvania Railroad?

Mr. Wood. All of the stock of the Pennsylvania Co. is owned by the Pennsylvania Railroad Co.

Mr. Bartlett. The Pennsylvania Co. is a holding company?

Mr. Wood. A holding company, as well as an operating company.

Mr. Bartlett. What business does the Pennsylvania Co. do besides holding?

Mr. Wood. It leases and operates the Fort Wayne road, the Cleveland & Pittsburgh, the Erie & Pittsburgh, and other roads.

Mr. Sterling. You stated it the other way. You said the stock of the Pennsylvania Co. was held by the Pennsylvania Railroad.

Mr. Wood. Owned entirely by the Pennsylvania Railroad Co. The stock of the Pennsylvania Co. is all owned by the Pennsylvania Railroad Co.

The Chairman. Where is your residence?

Mr. Wood. Pittsburgh, Pa.

The Chairman. How long have you held this position?

Mr. Wood. Four or five years.

The Chairman. What was your previous position?

Mr. Wood. I was one of the vice presidents previously to that.

The Chairman. Did you hold any other position with the railroad, such as general counsel, or anything of that sort?

Mr. Wood. No, sir. I was at one time general manager of the Pennsylvania lines west of Pittsburgh.

The Chairman. What were your duties as general manager?

Mr. Wood. I had general charge of the operation of the railroads.

The Chairman. And as vice president?

Mr. Wood. As first vice president I have a general charge of all the departments, the operating, the legal, and all the others; general supervision.

The Chairman. Have you anything to do with the making of rates for the traffic carried over your line?

Mr. Wood. No, sir.

The Chairman. Have you ever had anything to do in the last 10 years with the making of rates?

Mr. Wood. I was in general charge of the traffic department prior to becoming first vice president.

The Chairman. How long was that?

Mr. Wood. Perhaps three or four years.

The Chairman. How long were you in charge?

Mr. Wood. I was in charge, I think, three or four years; perhaps more. I do not recall exactly how long. That was prior to my becoming first vice president.

The Chairman. In that position had you any jurisdiction or consideration or fixing of the rates on coal and ore and coke?

Mr. Wood. The freight traffic manager and the general freight agent reported directly to me.

The Chairman. They reported to you the rates on ore from the lower lake ports to points of destination on your line and connecting lines?

Mr. Wood. If there was anything to be said about them and they desired to confer with me in regard to them, they naturally would; yes, sir. I have no doubt during the time I was first vice president in charge of traffic they did confer with me.

The Chairman. The ore rates from these ports are the same on all lines?

Mr. Wood. From which ports?

The Chairman. The ore rates from the ports by way of all lines to points common to all roads.

Mr. Wood. From the Lake Erie ports—those are the only ones we are interested in—yes. They are common to all the roads.

The Chairman. When were those rates made; do you know?

Mr. Wood. No; I don't know just when the present rates were put into effect. I think, perhaps, two years ago.

The Chairman. Will you explain to the committee just the manner the means by which these rates on ore from the Lake ports to the Pittsburgh district are made. How do you determine what is a just and equitable rate, as to what the rate will be, and whether it is just and reasonable?

Mr. Wood. Many years ago, long before I became connected with or had anything to do with the traffic end of the matter, I have been told that the railroads and the furnace people got together to determine what should be the proper rates. The conclusion reached was that the cost of the freight rate to assemble the raw material going into a ton of pig iron should be substantially the same at the competing districts, we will say, to the valleys and Pittsburgh. That necessarily meant a higher rate on ore to Pittsburgh than to the valleys, and a higher rate on coke to the valleys than to Pittsburgh. That arrangement has prevailed generally ever since I have known anything about it, and has generally been, so far as I know, satisfactory to the furnace people, and they seemed to have prospered under it.

The CHAIRMAN. What is the distance from the valleys to Pittsburgh?

Mr. WOOD. I should say from 60 to 75 miles.

The CHAIRMAN. What concerns have furnaces in this valley; what cities are located there?

Mr. WOOD. Youngstown, Girard, New Castle, Sharpsville, Sharon, Middlesex, and, I think, Niles.

The CHAIRMAN. What companies have steel mills and blast furnaces in these towns?

Mr. WOOD. The Youngstown Iron & Tube Co., the Shenango Furnace Co., the Briar Hill Furnace Co. The Steel Corporation has mills and furnaces in that section, and the Girard Iron Co. has furnaces, also the Thomas Iron Co., and I think the Youngstown Iron & Steel Co., or iron company, I don't know which.

The CHAIRMAN. Does the Republic Iron & Steel Co. operate there?

Mr. WOOD. Oh yes; the Republic Iron & Steel, too; a very large plant.

The CHAIRMAN. As I understand you, the railroads estimated what was the cost of transporting ore from the lake ports to Youngstown, and the cost of transporting coke to these same valleys, and the cost of transporting the same material to Pittsburgh, and they so graduated their rates as to make the load in a blast furnace, whether located at Youngstown or at any of these other points you have mentioned, or at Pittsburgh, approximately the same.

Mr. WOOD. Substantially the same; that is, the freight rate on that raw material going into the furnaces to make a ton of pig iron.

The CHAIRMAN. So that for instance if a blast furnace in Youngstown had a natural advantage by virtue of a shorter haul, or something of that sort, in the assembling of its ore, you arranged your coke rate with reference to that natural advantage, and if a furnace in Pittsburgh had some advantage in the assembling of the coke, you arranged your ore rate to meet that situation, and you so adjusted your freight rates that the cost of assembling the raw materials was practically identical in these various furnaces?

Mr. WOOD. That was the intention, and it was practically done, approximately.

The CHAIRMAN. Take the blast furnaces in the valley. What advantage had they in the assembling of ore and in the assembling of coal by virtue of their situation?

Mr. WOOD. They were nearer the lake ports where the ore came from.

The CHAIRMAN. How much nearer?

Mr. WOOD. I think the valleys might be said to be in the neighborhood of 70 miles by the shorter route; probably 100 by the longer route, as against anywhere from 150 to 160 or 170 by Pittsburgh.

The CHAIRMAN. What advantages had the furnaces in Pittsburgh?

Mr. WOOD. They had the advantage of being nearer the region of the coke.

The CHAIRMAN. How much nearer were they to the Connellsville region? I presume that is where you got your coke?

Mr. WOOD. Yes, a great deal of it. I should say the average distance from the Connellsville region was 55 or 60 miles.

The CHAIRMAN. From Pittsburgh?

Mr. WOOD. From Pittsburgh; and to the valleys it would probably be about 130 to 150 miles, depending upon the particular point in the valleys.

The CHAIRMAN. These rates then were not determined so much by the cost to the carrier of transporting these various materials as the effect of the rate upon the consignee. That was the prime consideration?

Mr. WOOD. They were made in the first place so as to enable the furnaces to do business.

The CHAIRMAN. I say, you took that as a basis instead of estimating it upon the cost of the service rendered?

Mr. WOOD. What I had intended to get at was that the rates were made so that the furnace people could do business: all of them could do business. And consequently that they should all be on an equality, as near as possible, as to the cost of the freight rate in assembling the raw material.

The CHAIRMAN. And in order to do that I say you considered the effect upon the blast furnaces, the effect upon the industry, rather than the making of a close calculation as to the cost of the service rendered?

Mr. WOOD. Yes.

The CHAIRMAN. You speak of the railroads fixing these rates. Explain to the committee how you determined this rate. Say there are a number of railroads which are parties to the same tariff between two regions, like the Connellsville district and the valleys or the lake ports and Connellsville. How did these roads which make this rate agree on this rate; by what means? How did they get together?

Mr. WOOD. They did not agree on them. The railroads would have a conference and they would discuss the situation. Road A would say, "I think this is a good rate." They would talk over what they thought would be a proper rate, each one for himself, and then finally if a common rate was suggested each road would say that individually it would make that rate.

The CHAIRMAN. What officer represented these various roads? We will call them A, B, and C.

Mr. WOOD. What officer?

The CHAIRMAN. What officer represented the road at these conferences? Whom would they select?

Mr. WOOD. Oh, sometimes the division freight agent, sometimes the coal and coke agent, sometimes the general freight agent. There was never any specific officer that I know of.

The CHAIRMAN. Generally was it the traffic manager of the road?

Mr. WOOD. Well, that might be and probably would be the case.

The CHAIRMAN. Each road usually sent one representative to these conferences, each originating line?

Mr. WOOD. At least one.

The CHAIRMAN. The ore rate from Ashtabula harbor to Pittsburgh is 96 cents, I believe, at present.

Mr. WOOD. On direct ore.

The CHAIRMAN. That rate was determined in the manner you described, was it?

Mr. WOOD. I presume it was; I assume that it was.

The CHAIRMAN. How long has that rate been in effect?

Mr. WOOD. About two years, I think.

Mr. Reed. Since July, 1909.

The Chairman. Is that rate net to the lines——

Mr. Wood (interposing). Net to the railroad company?

The Chairman. Yes.

Mr. Wood. No, sir.

The Chairman. What terminal allowance at the lake port and destination is deducted from it?

Mr. Wood. There is a terminal allowance made to all the furnaces in the Pittsburgh district.

The Chairman. How much?

Mr. Wood. Six cents a ton.

The Chairman. What is that terminal allowance for?

Mr. Wood. Most of these furnaces have railroads of their own and do a certain amount of switching work. This allowance is made to represent to a certain extent the work that they do which possibly the railroads should have done.

The Chairman. If you had a furnace down there that did not have any railroad, without any terminal facilities, would it get that allowance?

Mr. Wood. I think in the Pittsburgh district all the furnaces get that allowance.

The Chairman. Do they all have terminal facilities?

Mr. Wood. I am not quite sure whether they have all terminal railroads or not.

The Chairman. If they did not have a terminal railroad would they get that allowance?

Mr. Wood. I think so, to put the furnaces on an equality.

The Chairman. Is that allowance made to the furnace or to the railroad? For instance take the Carnegie Steel Co.'s furnace. Did you make that allowance to the furnace, or did you make it to the Union Railroad?

Wr. Wood. No, that allowance I think is made to the Union Railroad. In case of Jones and Laughlin it is made to their Monongahela connecting railroad.

The Chairman. Suppose you have the case of a furnace where you run a railroad out to it; would you make that allowance?

Mr. Wood. I don't know whether there are any such. Mr. Reed says there is a furnace in the Pittsburgh district that has that situation and gets the same allowance.

The Chairman. Do you know of any furnace that gets an allowance that has no terminal facilities, and does no switching of its own?

Mr. Wood. In the Pittsburgh district I do not think I do.

The Chairman. What other deductions are made from that rate? Are there any at the docks at Ashtabula?

Mr. Wood. There used to be deductions made at the docks, but I am not sure whether there are any now or not. If you will permit me I will inquire of Mr. Orr.

Yes, there is 2 cents allowance made at the docks, 2 cents on direct and 10 cents on stored ore. That averages 3.6 cents on all ore.

The Chairman. What allowances are made to the Youngstown furnaces?

Mr. Wood. Not any.

The Chairman. Have they switches?

Mr. Wood. Many of them.

The CHAIRMAN. Where you have furnaces that have switches and perform a service identical with, say, the Union Railroad, do you make any allowance to them?

Mr. WOOD. No, I think there is none made there, excepting that in the valleys there are two or three different arrangements. At some of the plants the various railroads switching will alternately put in an engine to do the switching. The plant is charged that portion of the engine's time that is done for inter-plant switching. The rest of the cost of the engine is prorated between the various roads delivering to the plant in proportion to their number of cars.

The CHAIRMAN. Do you know what that would amount to? Can you form any approximation what it amounts to?

Mr. WOOD. No; I do not know. I know that at Sharon where we made an arrangement a good many years ago, the allowance was made of 3 cents per ton.

The CHAIRMAN. Has that subject been under investigation recently, do you know?

Mr. WOOD. Yes, this whole subject of terminal allowance has been under investigation and is still.

I would like to add, Mr. Chairman, that while there are no allowances made to the valley furnaces, in determining the assembling costs of freight, of the raw material going into a ton of pig, the allowances made in the Pittsburgh district are taken into consideration.

Mr. YOUNG. The idea is to put the furnaces in both places on a parity, is that the idea?

Mr. WOOD. As near as we could. If you care to have it, I will give you the figures as representing the amount of this assembling material going into a ton of pig.

The CHAIRMAN. I would like to have that.

Mr. WOOD. At Pittsburgh it is $2.7515; in the valleys it is $2.735.

Mr. YOUNG. That is the assembling cost?

Mr. WOOD. No, that is the freight rate on the raw material that goes to make a ton of pig. We have figured in arriving at this on not quite 2 tons of iron ore to make a ton of pig, a shade over a ton of coke, and a little less than a quarter of a ton of limestone.

The CHAIRMAN. Will you separate that into ore, coke, and limestone, so that we can form some idea about it?

Mr. WOOD. At Pittsburgh the cost——

Mr. BARTLETT (interposing). You mean the freight costs?

Mr. WOOD. Yes; I am speaking now of the freight costs.

At Pittsburgh the freight costs of the ore going to make a ton of pig is $1.6836; on coke it is 77 cents; and on limestone it is 29.7 cents.

Mr. BARTLETT. You are calculating now assembling the freight from what point?

Mr. WOOD. From wherever they get their raw material. As far as the ore is concerned, they get it substantially from the same point; as far as the coke is concerned, they get that substantially from the same point.

The CHAIRMAN. You figure the ore as coming from what point?

Mr. WOOD. Lake Erie ports.

The CHAIRMAN. You figure the cost of assembling from Lake Erie ports, as that is figured, just as if the ore was in a huge dump, or in the cars at the Lake ports?

Mr. WOOD. Yes, sir.

The CHAIRMAN. You do not figure the cost from the Missabe Range to the Lakes?

Mr. WOOD. Oh, not at all; we are not interested in that at all. This is only the cost from the lower Lake Erie ports, the south shore of Lake Erie.

Mr. REED. If I may interrupt you a moment, Mr. Wood has said he was figuring on something less than a quarter of a ton of limestone. It is about a half ton, is it not?

Mr. WOOD. Yes, it is.

Mr. REED. I know you did not want to give it incorrectly.

Mr. WOOD. Yes; it is a little less than half a ton of limestone. These figures are given in decimals, and I used the wrong decimal.

The CHAIRMAN. Will you give us the cost of assembling the coke and limestone in the same way? Did you give us that?

Mr. WOOD. The coke I gave you as 77 cents, and the limestone as 29.7 cents.

Mr. YOUNG. That is at Pittsburgh, all of this?

Mr. WOOD. These are all at Pittsburgh. Those go to make up the total of $2.75 and a fraction.

The CHAIRMAN. Have you the figures for Youngstown?

Mr. WOOD. I have them for the valleys. That is the same as for Youngstown.

The ore would be $1.0587; the coke would be $1.5079; the limestone would be 16.8 cents, making the total cost in the valleys as $2.735, as against $2.75 in Pittsburgh.

The CHAIRMAN. Can you give us the figures at Cleveland and Wheeling?

Mr. WOOD. At Wheeling the total cost is $2.825. That is gross. I will give it to you in detail. This is at Wheeling now. For ore it will be $1.132; for coke it will be $1.452, and for the limestone 24 and a fraction cents, making a total of $2.825 at Wheeling as against $2.75 at Pittsburgh, and as against $2.735 for the valleys. Now, whether rightly or wrongfully, that arrangement is one that has been eminently satisfactory to the furnaces in those districts. As I say, it was originated before my time. But you can see the theory of it anyhow, whether it is right or wrong.

Mr. BARTLETT. This was a rate fixed by agreement between whom?

Mr. WOOD. Well, I can not say it was an agreement. It was many years ago. It was some sort of an understanding between the furnace masters, makers of pig iron, in those days, and the railroads.

Mr. BARTLETT. The producers of ore, coke and limestone had nothing to do with the arrangements, those who sold these things had no hand or voice in the making of the rate?

Mr. WOOD. I really can not say as to that.

Mr. BARTLETT. They were somewhat interested in it, were they not?

Mr. WOOD. I dare say they had their say in it.

Mr. BARTLETT. The reason I asked the question was you said it was an understanding—or whatever you may call it. I am not calling it anything except what you did—and that it was made between the owners of the furnaces and the railroads.

Mr. WOOD. No. Perhaps I did not make myself clear. The understanding was that the method which I have referred to here of making the assembling costs on the raw material at these various points, approximately even, was satisfactory to these people.

Mr. BARTLETT. To whom?

Mr. WOOD. To the furnace men, because they were the ones who were in competition, and they pay the freight. They were producing pig iron and selling it in each other's territory. They were in competition, and they thought this was a fair arrangement.

Mr. BARTLETT. Did not the freight arrangement have any effect upon the price at which the raw materials were sold to the furnace men?

Mr. WOOD. I do not know whether it did or not. I know that the raw material has moved freely into the furnaces, and the traffic has moved freely out. In other words, they have been doing business and prospering.

The CHAIRMAN. What railroads sit in conferences; which of the railroads that transport these materials in this region you are talking about?

Mr. REED. Which do you mean?

The CHAIRMAN. Coke and ore.

Mr. REED. There is the testimony that some of the railroads that carry ore do not sit in conference. Your question combined the two ideas.

The CHAIRMAN. What railroads transporting this ore, coke, and limestone sit in these conferences? What railroads transporting coke, for instance, sit in these conferences?

Mr. WOOD. Well, the coke is transported by the Pennsylvania Railroad, which originates it; the Baltimore & Ohio, the Pittsburg & Lake Erie.

The CHAIRMAN. Does the Erie Railroad participate in them?

Mr. WOOD: Yes, the Erie has coke delivered to it after it gets into the valleys, by the Pittsburg & Lake Erie, and then it transports it.

The CHAIRMAN. The Wheeling & Lake Erie?

Mr. WOOD. The Wheeling & Lake Erie transports coke which is delivered to them by some of their connections.

The CHAIRMAN. The Bessemer & Lake Erie?

Mr. WOOD. I really do not know whether they carry any coke or not.

The CHAIRMAN. What railroads participate in these conferences fixing the rate on ore?

Mr. WOOD. The roads that haul the ore are the Pennsylvania Company lines, the Baltimore & Ohio, the Lake Shore, and the Erie.

The CHAIRMAN. The Bessemer & Lake Erie?

Mr. WOOD. Not that I know of. While they carry ore, I have no recollection of their being present at any conference that I have been at.

Mr. YOUNG. Mr. Wood, I did not understand you to answer directly the chairman's question. His question related entirely to the conferences. I understand your answer to be that certain roads carry ore, and certain roads carry coke. But the question was as to the conferences.

Mr. WOOD. I beg your pardon. Those roads would be represented at those conferences. The roads that carry the material would be represented at the conferences, and those roads were the ones I named before.

The CHAIRMAN. Do you state positively that the Bessemer & Lake Erie Railroad does not participate in the conferences touching the proper rate on ore?

Mr. Wood. As far as I know, they do not.

The Chairman. Do you remember the last conference that was held where you notified the various consignees of the rate on ore and coke?

Mr. Wood. No, I do not. I do not know when that was. If I issued any such statement to that effect I, of course, was there.

The Chairman. Did not you send out the notices in the last conference where this question was passed on?

Mr. Wood. I think not. In fact, I don't know when the last conference was. But I have no recollection of having sent out any such notice. It is possible I may have done so, but I have no such recollection of that, because, as I say, I have not had anything to do with the details of the traffic for three or four years.

The Chairman. You remember when you did sit in these conferences, do you not?

Mr. Wood. Oh, yes; I recollect when I was at any such conferences.

The Chairman. Of the railroads that I have mentioned?

Mr. Wood. Yes.

The Chairman. Did the Baltimore & Ohio, the Lake Shore & Michigan Southern Railway, the Pennsylvania Railway, the Bessemer & Lake Erie Railway, the Wheeling & Lake Erie Railroad participate in those conferences?

Mr. Wood. As I said before, I think they all did with the exception of the Bessemer & Lake Erie. I have no recollection of their participating in those conferences.

The Chairman. Was it not eligible to participate in them? Did it not have the same right as the other railroads?

Mr. Wood. It had the right to participate; it had the right also to stay out, if it was not there.

The Chairman. Was there any reason why it should remain out when the others were present?

Mr. Wood. Except it did not desire to participate, I assume.

The Chairman. Did they make the same rate you did?

Mr. Wood. Yes; as far as I know, the rates are the same on that road as on all the others.

The Chairman. The thing I want to get at is why their road should have been absent from these conferences.

Mr. Wood. I can not speak for them, but I assume that they haul no ore except their own, and that they did not think it cut much figure whether they were there or not. When I say that I mean the Bessemer & Lake Erie road is assumed to belong to the Steel Corporation and hauls only Steel Corporation ore. That is what I meant when I said "hauled their own."

Mr. Reed. Of course, Mr. Chairman, you can not expect Mr. Wood to give the reasons that may have been in the minds of the Bessemer officials.

The Chairman. No; but he can give his reasons. He would not know except from his knowledge of the business.

In considering and fixing rates on ore to Pittsburgh, is it not a fact that at the same time rates to other consuming points were also considered and fixed, such as rates on ore to Wheeling, Steubenville, Mingo Junction, Bellaire, Johnstown, New Castle, Sharon, and numerous other points?

Mr. Wood. Oh, yes. When the Pittsburgh rates were fixed they all depended on the Pittsburgh rate for the reasons I have given here, and in which the attempt was made to have the assembling cost the same at all of those points.

The CHAIRMAN. If the Bessemer & Lake Erie Railroad was eligible to sit in those conferences, and did sit in them, in considering and fixing rates on ore to those points, it would fix rates on ore not reached by these lines, would it not?

Mr. WOOD. I do not know that it did make rates to any point except Pittsburgh.

The CHAIRMAN. But, as I understood you to say, these various railroads fixed this rate to Steubenville, Bellaire, Johnstown, New Castle, Sharon, and so on, did they not?

Mr. WOOD. Yes, sir.

The CHAIRMAN. A good many of those points are not on the Bessemer & Lake Erie lines, are they?

Mr. WOOD. No.

The CHAIRMAN. If a representative of the Bessemer & Lake Erie should sit in those conferences he would have a voice—as he was eligible to sit—in the rate made to those points, would he not?

Mr. WOOD. That would depend on what his authority was in the conference and in what way the conference recognized him. As I say, I have no recollection of their having been there.

The CHAIRMAN. As you have stated, when these roads met in conference they did fix rates to those points?

Mr. WOOD. Yes.

The CHAIRMAN. And one railroad would have as much voice as another, would it not, if it was there in the conference; each fellow was in the same representative capacity and had the same standing, did he not, as the representative of his railroad?

Mr. WOOD. They would all discuss the matter and decide what to do.

The CHAIRMAN. As I understand it, these conferences would meet, as representatives from the various States meet over here in the House, each fellow in a representative capacity, and each having a voice in the matter under discussion; you made no distinction or discrimination of one representative as against another?

Mr. WOOD. No.

The CHAIRMAN. Each fellow had the same voice. Then if the representative of the Bessemer & Lake Erie were there he would have a voice in one thing as well as another, would he not; you would not confine his expression of opinion to one particular subject, would you?

Mr. WOOD. As I do not think he was there, I do not know just what we would have done had he been there.

The CHAIRMAN. How would his authority have differed from the authority of other members if he had been there?

Mr. WOOD. If he had been there, a full partner in the conference, he would have been there on equal terms with the others.

Mr. GARDNER. As I understood you the conference fixed on the rate to Pittsburgh, and the other rates automatically adjusted themselves, in compliance with the policy generally laid down to make the cost of assemblage the same at all the different furnaces. Was not that the case?

Mr. WOOD. Generally, yes.

Mr. GARDNER. And even if the Bessemer & Lake Erie had been there they would not have taken part in fixing any rates except the

Pittsburgh rates, because the other rates automatically adjusted themselves?

Mr. WOOD. I would think so.

The CHAIRMAN. They would take part in fixing the basic rate, would they not?

Mr. GARDNER. Yes; that would be on their own line.

Mr. WOOD. If they were in the conference, yes, sir.

The CHAIRMAN. Did these conferences have a secretary?

Mr. WOOD. I do not think so. Do you know, Mr. Orr? Mr. Orr says not. I do not think so.

The CHAIRMAN. Did not you keep any minutes?

Mr. WOOD. So far as I know, not.

The CHAIRMAN. Was there no record kept of the meetings?

Mr. WOOD. No, sir. Mr. Orr says everyone made their own memorandum. There are no minutes. There is no organized conference with a chairman or secretary.

The CHAIRMAN. No person is authorized to keep any official record of these meetings?

Mr. WOOD. So far as I know, not.

Mr. BARTLETT. Were there stated times at which they met?

Mr. WOOD. I beg your pardon?

Mr. BARTLETT. How would you get a meeting of these gentlemen together? Would it just happen so?

Mr. WOOD. I guess there has not been any for two or three years, because there has been no change of the rate.

Mr. BARTLETT. How did you get together in order to have this understanding or agreement?

Mr. WOOD. Some one of the railroads would write a letter to the roads interested and say, "It is desirable to hold a conference for certain reasons in regard to the ore rate," or, "somebody wants the ore rate reduced," or, "somebody wants it put up," and we ought to have a conference to consider and decide the matter."

Mr. BARTLETT. You do not know of anybody who originated the idea of having a conference?

Mr. WOOD. Oh, anyone of the parties to it. It was frequently done over the telephone, or by word of mouth, and sometimes by letter.

Mr. BARTLETT. What binding force did any such agreement or understanding have upon the railroads?

Mr. WOOD. None whatever.

Mr. BARTLETT. But it has been observed?

Mr. WOOD. It has been observed; yes.

Mr. BARTLETT. At the beginning was there just one held, then no other, and the understanding was adhered to; or were they frequent conferences, or if not frequent, how often were they held?

Mr. WOOD. Oh, they were very infrequent. I should say they were held only whenever there was a change made in the ore rate.

Mr. BARTLETT. A change made in the ore rate—do you mean some railroads would charge more or less, or what?

Mr. WOOD. If that was done, and if the other roads wanted to carry any business they would go down to the one that was charging the low rate.

Mr. BARTLETT. Do you recall any instance where any conference has assembled, or gotten together, by reason of any failure on the part of any carrier to observe the rate?

Mr. Wood. No; I think not.

Mr. Bartlett. So, then, there has been no occasion since the understanding about what the rate should be, for a conference; there has been no conference about the rate since the first agreement or first meeting?

Mr. Wood. There has been no conference as far as I know of since the time the last change in the rate was made.

Mr. Bartlett. When was that?

Mr. Wood. I understand that was in 1909.

Mr. Bartlett. Was that the first or only conference that was held?

Mr. Wood. Oh, no; there must have been a great many of them prior to that—whenever there was a change in the ore rate.

Mr. Bartlett. Then you had a conference several years ago in which this understanding or agreement—whatever you may be pleased to call it—was had; is that true? You agreed it should be carried out and it was carried out; that is true, is it?

Mr. Wood. Which agreement do you mean?

Mr. Bartlett. You had some conference some years ago in which this understanding as to the rate to be charged was had or acted on?

Mr. Wood. Yes; there must have been.

Mr. Bartlett. How long ago was that?

Mr. Wood. I have not an idea. We have been hauling ore for 20 or 30 years.

Mr. Bartlett. How long ago since the last conference that you can recall?

Mr. Reed. You mean since the earliest?

Mr. Bartlett. No.

Mr. Wood. I really do not know. I do not know when the last conference was at which I was present.

Mr. Reed. I think Judge Bartlett means how long since the earliest conference was held, if you can remember.

Mr. Bartlett. No; I wanted the last one.

Mr. Reed. Mr. Wood has answered that; in 1909.

Mr. Wood. Yes.

Mr. Bartlett. Can you recall any before 1909, before the last one?

Mr. Wood. Oh, I was at several, but when they were I can not recollect.

Mr. Bartlett. If you had this agreement at this conference, what was the occasion to call another?

Mr. Wood. Why should there be another conference?

Mr. Bartlett. Yes.

Mr. Wood. I suppose it was to change the rate.

Mr. Bartlett. If the rate was satisfactory why should it be changed?

Mr. Wood. It may have been satisfactory to the railroads, but it may not have been satisfactory to the furnace people; and then the commercial conditions may have changed so that some change was necessary.

Mr. Bartlett. Has it been changed often, and if so, how many years does it go without being changed; is it the same now as it was at first, when you first had the understanding?

Mr. Wood. I can not tell you at all, Judge Bartlett; I would not know. I think it is safe to say it is not. Whether it is more or whether it is less I do not know.

Mr. BARTLETT. Were you present at any conference in the last year or so in which the independent steel manufacturers were present and asked to be heard?

Mr. WOOD. Oh, yes.

Mr. BARTLETT. When was that?

Mr. WOOD. That was some time last fall.

Mr. BARTLETT. What did the independents want to do?

Mr. WOOD. They wanted a lower rate on ore, they wanted a lower rate on coke and a lower rate on coal.

Mr. BARTLETT. Did they get it?

Mr. WOOD. They have not gotten it.

Mr. BARTLETT. Were you present when that matter was discussed in the conference?

Mr. WOOD. Yes.

The CHAIRMAN. What was the attitude of the Bessemer & Lake Erie Railroad toward those reductions?

Mr. WOOD. I do not know that it expressed itself at all. My recollection is their representative was there, but I do not think he expressed himself in any way whatever. The manufacturers or the independent operators were told that the matter would be taken under consideration.

Mr. BARTLETT. And it was taken under consideration?

Mr. WOOD. Yes.

Mr. BARTLETT. And denied?

Mr. WOOD. And declined.

Mr. BARTLETT Was the information sent out to anybody, and if so to whom? Where was the information conveyed that it had been declined?

Mr. WOOD. It was conveyed to the persons who made application for the reduction.

Mr. BARTLETT. To the independents?

Mr. WOOD. To those furnaces in the valleys, the same ones that made the application.

The CHAIRMAN. Was that application of the independents—I don't know whether they were independents or not; I merely use that as a designation—resisted by anybody, their application for cheaper rates; and if so, by whom?

Mr. WOOD. All the railroads that entered into the discussion opposed any change in the rates.

Mr. GARDNER. Are those rates adopted by a majority vote of the railroads represented?

Mr. WOOD. No, sir.

Mr. GARDNER. What is required to adopt a new rate in one of those conferences—unanimity?

Mr. WOOD. I guess if we said we were going to make the rate the rest would trot along.

Mr. GARDNER. That is to say, the Pennsylvania Railroad——

Mr. WOOD (interposing). No. If any one road said it was going to make a certain rate, the others would very likely follow it.

Mr. GARDNER. That is, it requires unanimity. If any railroad insists on making its own rate the rest must necessarily follow; is that it?

Mr. WOOD. They must follow.

Mr. GARDNER. As a matter of fact, have you ever in your experience known any one railroad to control the situation like that?

Mr. WOOD. I think several years ago it was done. Excuse me a moment. May I inquire of Mr. Orr?

The CHAIRMAN. Certainly.

Mr. WOOD. I think a good many years ago there was independent action taken.

Mr. GARDNER. With the result that the others followed suit?

Mr. WOOD. Yes.

Mr. GARDNER. Which railroad took independent action?

Mr. WOOD. The Pittsburgh & Western, now a part of the Baltimore & Ohio system.

Mr. YOUNG. Was that a reduction?

Mr. WOOD. I think it was.

Mr. YOUNG. Naturally they would follow if there was a reduction.

Mr. WOOD. Yes. I will not be positive about that instance, but I think that independent action was taken. That was, however, a great many years ago.

Mr. BARTLETT. Can you give me some of the independents who were present at this conference you speak of which complained of the rate and wanted it reduced?

Mr. WOOD. There was the Republic Iron & Steel Co., by two of its representatives.

The CHAIRMAN. Will you kindly tell where they are located, as you go along?

Mr. WOOD. The Republic Iron & Steel Co. is located at Youngstown; they also have plants at New Castle and at Chicago, Mr. Orr tells me, and some other places. I do not recollect where they are. That is one concern that was represented. Then the Shenango Furnace Co., by W. P. Snyder.

Mr. BARTLETT. Where at?

Mr. WOOD. At Sharpsville.

The CHAIRMAN. That is in the valley?

Mr. WOOD. Oh, yes; these are all valley concerns. The Youngstown Sheet & Tube Co., by Mr. Campbell. They are in the valley, at Youngstown. There were others there. I think probably the Youngstown Iron & Steel Co. was represented.

Mr. BARTLETT. Where was that conference held?

Mr. WOOD. In New York.

Mr. BARTLETT. You said last fall. Can you give us some nearer date? Was it in December, November, or October?

Mr. WOOD. I would think it would be November. Do you recollect, Mr. Orr?

Mr. ORR. I do not recollect.

Mr. WOOD. I think it was November, because I was abroad and did not get back until October, and I was present.

Mr. BARTLETT. How did it occur that you met. At whose suggestion was the conference held?

Mr. WOOD. The conference was held at the suggestion, I may say, of what you would call the independent operators in the valleys.

Mr. BARTLETT. With whom did they communicate their desire to have any conference?

Mr. WOOD. They communicated with me.

Mr. BARTLETT. Why did they communicate with you?

Mr. Wood. Well, we are a large factor in the valley, and two of them happened to know me personally, and so they came to me.

Mr. Bartlett. Had the representatives of these manufacturers been present at any of these other conferences?

Mr. Wood. Which other conferences?

Mr. Bartlett. That you had had prior to this—any time that you can recall?

Mr. Wood. No, sir; not at any conference. No; I think not.

Mr. Bartlett. They had not before that time participated in any conference by which this understanding or agreement—whatever you call it—was had or acted upon?

Mr. Wood. Not in the same way. Whenever there was a change in the rates, prior to any such change there was always a conference or a talk with various independent operators, so that the railroads knew what they wanted.

Mr. Bartlett. They were, then, consulted before any change in the rates?

Mr. Wood. They were always talked with. I may safely say always.

The Chairman. When you got ready to determine on your action, such action as each individual member would recommend for himself, were these people present?

Mr. Wood. Oh, no, sir.

Mr. Bartlett. What reason did they give for wanting a change in the rate?

Mr. Wood. There were two reasons principally. The first one was that they were not making any money. The second was the railroads were making entirely too much money.

Mr. Bartlett. Out of the rates?

Mr. Wood. Out of their business. They said, and I am quoting Mr. Campbell, who was the spokesman for the independents, who also was the president of the Youngstown Iron & Steel Co., a mighty good concern itself, and Mr. Campbell is a very conservative man, too, I think. He said that if the prices of their products had not decreased the way they had they would not be asking the railroads for any change in the rates. That under the market conditions they could not sell their product and make any money, and as they thought, we were making too much money.

Mr. Bartlett. Who do you mean, the railroads?

Mr. Wood. By "we" I mean the railroads.

The Chairman. In that connection did he complain that the companies owning the railroads under the present rates were receiving a fictitious advantage over those that did not own and control or operate any common carrier?

Mr. Wood Yes.

The Chairman. What was his complaint about that?

Mr. Wood. He said at that meeting that the Steel Corporation had an advantage in owning its railroads.

The Chairman. Did he explain what that advantage was?

Mr. Wood. I don't recollect whether he did or not; but probably he did.

The Chairman. You speak of the Bessemer & Lake Erie Railroad carrying its own ore. Suppose the Bessemer & Lake Erie Railroad should make a rate from Conneaut to Pittsburgh, say, of $2 a ton; the other railroads would concur in that rate and the Interstate Commerce Commission would not interfere. Would that have any effect on the Steel Corporation so far as ore transported over the Bessemer & Lake Erie was concerned?

Mr. Wood. No, I should think the Steel Corporation would transport the ore just the same over the Bessemer road, whether the rate was $2 or $1.

The Chairman. Its cost would be estimated not by the rate but by the actual expense incident to the transportation of that ore from Conneaut to Pittsburgh, as I understand it. That would be the measure of its outlay, would it not?

Mr. Wood. The cost of doing the work; the total cost of operating the road.

The Chairman. The manufacturers having no common carrier, whatever tariff you fixed would mean an actual outlay to them?

Mr. Wood. Naturally.

The Chairman. And the difference between the cost of assembling the raw materials to the independents would simply be that much more over and above the cost to the United States Steel Corporation or any other concern owning a railroad? That would be the effect of it, would it not?

Mr. Wood. A plant that had a railroad that hauls raw material and which could get more for hauling it than it cost to do it would have an advantage over a plant not so situated.

The Chairman. To that extent.

Mr. Young. It would have a larger investment also, would it not?

Mr. Wood. Unquestionably.

The Chairman. Mr. Wood, how long have you been in the railroad business?

Mr. Wood. I left college in 1864, Mr. Stanley, and I have been there ever since.

The Chairman. You have had experience in a good many departments in that time?

Mr. Wood. Yes, sir.

The Chairman. Did you ever hold any other positions than those you have mentioned?

Mr. Wood. Yes, sir.

The Chairman. What were they?

Mr. Wood. Well, I have been engineer of a railroad; I have been superintendent of motive power, general superintendent of transportation. Then in addition, those that I have already mentioned.

The Chairman. Mr. Wood, I wish you would give us your opinion on the propriety of the ownership and operation of purely plant facilities as common carriers, and this practice of making terminal allowances to such plant facilities.

Mr. Wood. I do not quite see how a large industry can get along without a railroad which may certainly be called part of a plant facility. It is not practicable with a large plant for it to get along without its own line of rails and its own power. That was tried in the valleys, where three or four roads reached an industry and each one would want to be shifting into the plant with its own engines and cars. The result was there was a congestion which would not have been there had there been but one engine shifting for all, and which finally had to be done by the plant getting its own engine.

The CHAIRMAN. Suppose a steel mill or a blast furnace owned its own facilities for the handling of cars needed in its yards and its plant. Is there any reason why those tracks and engines should not be used as a part of the plant and not be separately incorporated as a distinct railroad system, enjoying certain privileges and perquisites, like divisions of rates and terminal allowances?

Mr. WOOD. The condition you suggest is the one that prevailed for many years.

The CHAIRMAN. Was there any reason why that could not be done? If there is any objection to it I would like you to state it.

Mr. WOOD. That is a matter that is being very thoroughly investigated just now by the commission.

The CHAIRMAN. And it is also a matter of interest to this committee.

Mr. WOOD. I dare say their opinion would be much more valuable than mine would be on the subject.

The CHAIRMAN. We have their opinion in a way, and now we want to get yours. Their opinion is that it is not a good practice.

Mr. YOUNG. We have their opinion before they commenced the investigation. It may be different when they get through with it.

Mr. WOOD. Personally, I would like to see the plant railroad confined to plant business.

Mr. YOUNG. That would be the attitude of the railroads generally, would it not?

Mr. WOOD. That I could hardly say. That would be my own.

Mr. GARDNER. When you say you would like to see it confined to the plant facility, do you mean speaking as a railroad man, in the interest of the Pennsylvania Co., you would like to see it confined to the plant business, or speaking from your own judgment of what ought to be done, that it ought to be confined to the plant business?

Mr. WOOD. From the latter.

Mr. GARDNER. That is, your personal point of view as an experienced man is that injustice would not be done to the United States Steel Corporation, for instance, by requiring them to alienate the ownership of the Bessemer & Lake Erie.

Mr. WOOD. I do not know about the injustice, but it would possibly make things a little easier for us in some respects.

Mr. GARDNER. I was not speaking from the point of view of the Pennsylvania Railroad Co. You were speaking from your own point of view more especially. What has been sticking in my mind is, whether the business of making steel, whether by the United States Steel Corporations or anybody else, can not be more economically done if they are permitted to own a railroad, provided the rates charged by that railroad are strictly controlled by the Interstate Commerce Commission. As against that there are a great many people who have the feeling that they ought not to be allowed to own railroads at all, just as railroads are not allowed to own certain classes of industry.

I myself have not made up my mind upon that question as to which is the best policy, and I would be very glad to have you give an opinion, not as representing the Pennsylvania Railroad, but as a man of experience, as to which point of view you would take.

Mr. WOOD. I should take the point of view that the plant railroads should be confined to a plant facility and not to general transportation.

Mr. GARDNER. That is exactly what I wanted to get your plain opinion about, as an experienced citizen, and not as a representative of a railroad.

The CHAIRMAN. Will you give us your reasons why you hold to that opinion.

Mr. WOOD. The steel business is one business, or any manufacturing business is one business, and the transportation business is another.

Mr. BARTLETT. Permit me to interrupt right there. The transportation business is a quasi public business, and is a public highway, although there is private capital invested in it, and it has a right to earn reasonable returns thereon. But the railroad is a public highway, and would not that be one of the reasons why you come to the conclusion you express?

Mr. WOOD. No; the reasons I gave were the ones that were most prominent in my mind.

Another one is the fact that those who were not owning railroads have felt that if they had owned railroads they would be able to produce their output cheaper.

Mr. YOUNG. Do you think that is a fact?

Mr. WOOD. I think it is an open question. Unless it is a very, very large plant indeed, I should say it was not a fact.

The CHAIRMAN. Mr. Wood, you are well acquainted with the provisions and the operation of what is known as the commodities clause in the interstate commerce act which inhibits railroads from owning coal mines and ore fields, and other industrial concerns. Your railroad can not own a mill or a mine.

Mr. BARTLETT. It can a sawmill.

The CHAIRMAN. Well, except a sawmill and things of that kind.

In your opinion, Mr. Wood, that is a wise provision of the law, is it not, to keep railroads out of those businesses?

Mr. WOOD. That is, as to whether this commodity clause is a wise provision.

The CHAIRMAN. Yes. Do you think railroads ought to engage in industrial enterprises?

Mr. WOOD. As a general proposition, no.

The CHAIRMAN. Is there any more reason why a railroad should engage in an industrial enterprise than that an industrial enterprise should operate a railroad?

Mr. WOOD. No, I do not know that there is.

The CHAIRMAN. If a railroad owned by an industrial were operated absolutely as a plant facility, that would compel every industrial concern to tender its freight to the railroad upon identically the same basis, would it not?

Mr. WOOD. I do not believe I understand the question.

The CHAIRMAN. I mean this. For instance, take the Union Railroad, or the Elgin, Joliet & Eastern, and other railroads that are owned by the steel corporation, and the Birmingham Southern, with which you are acquainted, and which is purely a plant facility; if those roads confined their operation simply to tendering the trunk lines their freight and you made your rate upon the freight as tendered to you, just as if you got it from a siding or a switch or a spur running into a small mill, would not that state of affairs result in every industrial concern tendering you its freight upon the same basis? There would be no opportunity for inequality unless the railroads gave a naked rebate? Is not that true?

Mr. WOOD. Why, I am not sure whether it is or not. I am trying to get the idea; I am not quite sure that I have it yet.

The CHAIRMAN. My idea is this, Mr. Wood. Take the man with a load of scrap iron who has brought his iron to you in a wagon and loaded it on the car; the man with a blind siding who has pushed his car by hand over the switch onto the main line, in order that you may attach your train to it, and a man with two or three switches and a single little switch engine, performing the same service of putting his car on your line; and a man with a railroad of 50 miles, which is purely a plant facility, performing the same service—if you attached to all those cars without giving any terminal allowance or division of rates, if those things were not permissible, then you would necessarily carry the freight of all industrials, whether big or little, identically upon the same basis, and the only way to escape that would be to give one man a naked rebate over another.

Mr. WOOD. That would seem so.

Mr. GARDNER. In reply to a question of the chairman, the chairman's question was substantially asking you whether or not you believed that a railroad should be permitted to own industrial enterprises, and you answered, as a general proposition, no. Now what exceptions do you make?

Mr. WOOD. I do not think I would make any exceptions.

Mr. BARTLETT. Is not this the thing that suggests itself to your mind. Take the case of the Reading Railroad or any railroad, for instance, which was built originally to develop a coal mine along its road, or the case of a road being built into a coal region. When it was chartered by the State of Pennsylvania it was not only authorized to build and operate a railroad along a certain line, between certain points, but also to engage in the production of coal. Now, one of the main purposes of it was to improve the coal region, to develop it, and to bring the product to the market, so that the people could get it. Would not that form an exception in your mind?

Mr. WOOD. Yes, but I rather thought the word "industrial" was used; that is what I had in mind.

Mr. BARTLETT. I supposed there was an exception, because in discussing the commodity clause in the interstate commerce act, the Supreme Court in their decision, the first decision they rendered, discussed that proposition at length, as to whether Congress had the power to provide that no railroad should own any interest, directly or indirectly, in any other corporation that produced commodities on its line, which were to be shipped over that line. It occurred to me that there was a great deal of force in the proposition that where a railroad had been originally chartered, not simply as a railroad, but had been chartered for the purpose of building a railroad and owning and operating mines, for the purpose of developing them, whether they be coal or iron mines, at that time not developed, that they ought to stand somewhat upon a different footing from a railroad which was chartered originally for the purpose of transportation only between points, and that in order to further its transportation business and increase its freight, to go out and engage in collateral undertakings.

That is the exception that occurred to me might be the one you had in mind.

Mr. WOOD. I think that is quite right. In the State of Pennsylvania, as I understand it, the coal companies are authorized to build a railroad.

Mr. BARTLETT. The railroad company was authorized to own and develop coal mines, as I understood it.

Mr. WOOD. No sir. I think that the Pennsylvania Coal Co. is authorized to build railroads. That is as I understand it.

The CHAIRMAN. The commodities clause does not reach that.

Mr. WOOD. But the railroads are not authorized, as I understand it.

Mr. BARTLETT. I was not speaking of the law of the State of Pennsylvania, specifically, I was speaking about this particular charter of the Reading Railroad Co., as I understood it, from the reading of the case in the Supreme Court of the United States.

The CHAIRMAN. The commodities clause, as it now is written, simply makes it necessary for a change in the form of securities or in the form of a concern on paper.

Mr. WOOD. The form of ownership.

The CHAIRMAN. The form of ownership?

Mr. WOOD. Yes, sir.

Mr. YOUNG. Mr. Wood, you spoke of some exceptions. What would you say of a lumber company—I have one in mind—that owned a large tract of lumber covering many thousands of acres and which builds a road about a hundred miles in length into this country in order to develop the timber lands and bring out the logs? Would you see any impropriety in that?

Mr. WOOD. Not at all. I do not see how they would get the lumber out without the railroad.

Mr. YOUNG. They might get somebody else to build that road, perhaps.

Mr. WOOD. Well, we have several instances of that sort. The Grand Rapids & Indiana road in northern Michigan is essentially a lumber road, and there are a number of roads such as you speak of owned by lumber companies.

Mr. YOUNG. If you should attempt to prevent a thing of that kind, would not the natural tendency be to delay the development of the country?

Mr. WOOD. Yes, sir; unless the road were willing to extend the branches in.

Mr. YOUNG. Take the conditions that we have here, and which we have been considering, on the Duluth & Iron Range. It occurred in this way: Some gentlemen went up into the State of Minnesota, the northeast corner of the State, into a wilderness from 80 to 100 miles from the lake, and opened up some large iron mines. There was no method of communication, and the same gentlemen then went on and organized a railroad company and built a railroad from two harbors up to these mines. Do you think there is any impropriety in permitting that?

Mr. WOOD. No, sir.

Mr. Young. Now, the same thing practically was done on the Messabe Railroad, where the road was started by some men who had the operation of a mine; the mine changed hands, and the railroad was completed by others who bought the mine. Do you think there is any impropriety in that?

Mr. Wood. Not as I understand it; no, sir.

Mr. Young. Now, let us continue that a step further. The United States Steel Corporation is organized and takes ore from these Minnesota properties by these railroads to the plants at Pittsburgh. It carries its ore down to the Lake Erie ports and delivers it there. If there had been no railroad owned by the Carnegie Co. connecting the lakes with Pittsburgh, do you think there would be any impropriety in the Steel Corporation's building a railroad from the lakes to Pittsburgh to carry its own ore—that is, a continuation of this carriage from the lakes?

Mr. Wood. That is a very difficult question. There is a great deal to be said on both sides of that. As long as it is confined to hauling only its own business your proposition seems right.

Mr. Young. But taking the thing as it would naturally exist, such a railroad running through a settled country must necessarily develop a lot of business along the road besides the steel corporation's business. Then, if it is to have the right to build the railroad at all, would it not be a great economic waste not to let it do general business?

Mr. Wood. Surely.

Mr. Young. Take this concrete case of this road: What, in your mind, are the objections, the real valid objections, from the standpoint of the public interests, to permit the steel corporation to own and operate that road?

Mr. Wood. Well, it seems to give it an advantage. It has this advantage, and only this, that if there is any profit in operating that road, it has that advantage over its competitors who do not own a railroad. At the same time, of course, it has a large investment in the railroad.

Mr. Young. From the standpoint of the public, what difference would it make to the public whether the steel corporation made that profit on the transportation, or whether the Pennsylvania Railroad or any other railroad made that profit?

Mr. Wood. I do not see that it would make any difference to them.

The Chairman. If the charges were the same on one as on the other?

Mr. Young. Yes; I assumed that, of course, they would have to be the same.

Now, is the objection that you have suggested based on the fear that these roads may be used by a concern having a large amount of freight to obtain undue advantages in the way of a division of rates and things of that kind?

Mr. Wood. No.

Mr. Young. Which amounts to indirect rebating.

Mr. Wood. No.

Mr. Young. What is it, then?

Mr. Wood. We would like to haul the business ourselves.

Mr. Young. Well, you do not mean that is your only objection to it?

Mr. Wood. That we would like to haul the business?

Mr. YOUNG. Yes, an industrial enterprise owning a railroad, that you feel it is getting in your domain?

Mr. WOOD. That is one very strong reason—we would like to haul the traffic.

Mr. YOUNG. But yet you say, in your judgment, that makes no difference to the public whether you haul it or whether somebody else hauls it, if it is under the same freight rate.

Mr. WOOD. Of course, there is a little selfishness that comes in there.

Mr. YOUNG. What I wanted to know is whether it is a real objection in your mind, or whether it is some idea that you have as to the interest of the public.

Mr. WOOD. Well, I have a shadowy idea—I do not know that I can give it to you definitely—that it would be to the general interest of the public if those railroads, owned by plants were confined to the plant facility feature. That is my general impression.

Mr. YOUNG. Is that idea clear enough in your own mind to state what your reason is for that shadowy belief?

Mr. WOOD. No; I do not know that I can definitely. We hear complaints from industries that do not have railroads of their own, that the ownership by other competing industries of such railroads is a great handicap to them. That, no doubt, is one of the shadowy things that I speak of.

Mr. YOUNG. Is it a handicap to them exactly, or does it give the other road an advantage in the profit it will make in the transportation?

Mr. WOOD. That, perhaps, is the better way to put it.

Mr. DANFORTH. The relations between your company and the Pennsylvania Steel Co. are quite intimate, are they not?

Mr. WOOD. The Pennsylvania Co. is a large shareholder.

Mr. DANFORTH. It is practically the owner of the Pennsylvania Steel Co.?

Mr. WOOD. No; it owns a little over 50 per cent of the stock of the Pennsylvania Steel Co.

Mr. DANFORTH. Now, how do you differentiate between that relation, between the relation of the railroad company, the principal stockholder, and the Steel Company, the industrial company, which is the property of the railroad, which is the situation we have been talking about and in regard to which Mr. Young has been asking you?

Mr. WOOD. Well, I do not know exactly how to differentiate that. That is a concern in which, as I say, we have a little over one-half of the stock; but we have no interest or connection with it or anything to do with it, so far as the Pennsylvania Co. is concerned, other than the ownership of the stock.

Mr. DANFORTH. Well, of course, the ownership of the stock carries with it the control and power to manage it as your interests may dictate, and I presume it is so.

Mr. WOOD. Well, I presume it is. However, personally, I do not know anything about it, because I am not on the board, and do not have anything to do with it.

Mr. DANFORTH. It is fair for us to assume that the Pennsylvania Steel Co. is not run in opposition to the interests of the Pennsylvania Co. or of the Pennsylvania Railroad?

Mr. **Wood.** I think that is a fair interest, and the same may be said of the Cambria Steel Company, which company we also own a majority of the stock of.

Mr. **Danforth.** I can not see, in line with these questions of Mr. Young, why the steel industry, the other corporations in the steel industry, and perhaps the general public, have not as good a right to complain against the ownership of those two steel companies by the railroad as the railroads have to complain of the ownership of these small plant facilities or terminal facilities by the Steel Corporation.

Mr. **Wood.** I think they have.

Mr. **Danforth.** They are parallel cases.

Mr. **Wood.** Yes; I think they have an equal right to complain.

Mr. **Young.** Do you think it would be better for the public if the Pennsylvania Railroad parted with its interest in those steel companies? Do you think the ownership and control of those companies by the Pennsylvania Railroad is an injury to the general public?

Mr. **Wood.** No; I do not believe this ownership is an injury to the general public.

Mr. **Young.** Well, ownership and management and control?

Mr. **Wood.** No; I do not think it is.

Mr. **Gardner.** Might it be?

Mr. **Wood.** Yes; almost anything might occur.

Mr. **Gardner.** I mean, if improperly managed, the interests of the public might be subject to greater dangers than if it were owned by independent parties; is that your opinion?

Mr. **Wood.** Well, from the known conservatism of the Pennsylvania Railroad, I would think there would be less danger of its being a public menace, if it were owned by it, than if it were owned by independents.

Mr. **Young.** What would you say as to the management of the Steel Corporation being conservative?

Mr. **Wood.** Most eminently conservative, in my opinion.

Mr. **Young.** Then, if your reason as to the Pennsylvania Steel Company is valid, why would you not say that it was more beneficial to the public to have the Steel Corporation own these railroads, because of its eminent conservatism?

Mr. **Wood.** I do not know where you gentlemen are going to land me with these questions.

Mr. **Bartlett.** I want to ask a question, if I may——

Mr. **Wood.** I am afraid I am getting mixed. There is only one of me; there are a good many of you.

Mr. **Bartlett.** Mr. Wood, what would be the inducement to the Pennsylvania Railroad, a corporation which was originally intended for the transportation of business, that being its chief purpose, to own the majority stock in a steel producing plant? You say they own over 50 per cent. What is the reason, the business reason or other reason, which suggests itself as to why the Pennsylvania Railroad should own an interest in those steel-producing plants?

Mr. **Wood.** They felt it was necessary, in view of the strength and size that the Steel Corporation was attaining, to be in a position to protect itself if necessary.

Mr. **Bartlett.** To protect itself from what?

Mr. **Wood.** In regard to the price of material, the price of its products.

Mr. Young. You not only have the ownership, but you feel that some protection is required, and you own the majority of the stock?

Mr. Wood. I believe that is the reason. I was not a party to the purchase.

Mr. Bartlett. Does the Pennsylvania Steel Co. or the Cambria Steel Co. make steel rails?

Mr. Wood. The Cambria Steel Co. makes rails and the Pennsylvania Steel Co. makes rails.

Mr. Gardner. How long did the Pennsylvania Railroad own that controlling interest?

Mr. Wood. I think it was very shortly after the incorporation of the Steel Corporation.

Mr. Gardner. And it was a defensive move in case the Steel Corporation should put up the price of steel rails to an exorbitant figure?

Mr. Wood. That, I understand, was the thought in the minds of the purchasers.

Mr. Gardner. They recognized the possibility of the United States Steel Corporation having sufficient control to dictate the price of steel?

Mr. Wood. They might have taken in the Pennsylvania Steel Co. also, if it were in the market.

Mr. Bartlett. Mr. Wood, how could the Steel Corporation, being only one of a number of plants producing steel rails, put the price of steel rails up on the Pennsylvania Co. or any other railroad company?

Mr. Wood. If they were the only one, they might be able to do it.

Mr. Bartlett. Has there been a time when they were the only one, outside of the Pennsylvania Steel Co. and the Cambria Steel Co.?

Mr. Wood. No, sir; I think not.

Mr. Bartlett. Is it not a fact that the railroad company officials who were looking after the interests of the railroad were laboring under the impression that the Steel Corporation would get a monopoly of the business of manufacturing steel rails, and be in a position to demand a price from the railroad which you would be compelled to pay?

Mr. Wood. Well, possibly that is what was in their minds, but the only reasons I have heard given by those who were in touch w th the matter are the ones I have mentioned.

Mr. Bartlett. The price of steel rails has been uniform for a number of years, has it not?

Mr. Wood. Yes, sir.

Mr. Bartlett. And it has been the same since the Steel Corporation was formed, has it not?

Mr. Wood. The same since when?

Mr. Bartlett. Well, the price has been the same——

Mr. Wood. It has been the same for several years.

Mr. Bartlett. Since 1901?

Mr. Wood. I can not say as to that. There was very little change, but there was in one year.

Mr. Gardner. Just before the United States Steel Corporation was formed.

Mr. Bartlett. Directors in the steel companies that you own stock in are also directors of the Pennsylvania Railroad or Pennsylvania Co.?

Mr. Wood. I think two of the directors of the Pennsylvania Co. are also directors in the Pennsylvania Steel Co.

Mr. Bartlett. You can vote a majority of the stock?

Mr. Wood. Owning it; yes, sir.

The Chairman. The Cambria Steel Co. and the Pennsylvania Steel Co. make supplies, steel cars, and things of that kind?

Mr. Wood. Yes, sir; frogs and switches; that is, the Pennsylvania Steel Co. and the Cambria Steel Co.

The Chairman. Is there anything else you care to ask him?

Mr. Gardner. I was wondering how, under the commodities clause, the Pennsylvania Railroad can own indirectly industrial concerns like that. We know they do own them——

Mr. Wood. It is common knowledge. It has been common knowledge for several years.

Mr. Gardner. It has been put in evidence several times, but I was wondering——

Mr. Wood. The Pennsylvania Co. has a most liberal charter, so that I fancy, as far as the Pennsylvania Co. is concerned, there is probably no question of its ownership.

The Chairman (addressing Mr. Reed). Do you know whether this ownership was prior to the passage of the commodities clause?

Mr. Reed. Yes, sir; I know it was.

Mr. Wood. Oh, yes, sir. We have acquired nothing, I assure you, since then.

Mr. Bartlett. The act does not apply simply to those thereafter acquired, but the act said they should not own them longer than 1912.

Mr. Reed. The Pennsylvania Co. is as much a manufacturing company as it is a railroad. Its charter is so broad that it is authorized to do both.

Mr. Bartlett. That was one of the questions that the Supreme Court did not adjudicate, Mr. Gardner.

The Chairman. One trouble is that you could change the ownership and have the Cambria Steel Co. and the Pennsylvania Steel Co. own the railroad instead of the railroad company owning the steel companies. You could change the ownership in a little while and avoid this commodities clause, as the law now is?

Mr. Wood. Which, the Pennsylvania Steel Co.? Excuse me, I did not quite hear what you said.

Mr. Young. Mr. Wood is not a lawyer.

The Chairman. I mean, you could make a change in the ownership to enable the Cambria Steel Co. and the Pennsylvania Steel Co. to operate the railroad company, just as the railroad company now owns a majority of the stock in those two steel companies.

Mr. Wood. Well, I would not think so.

The Chairman. I understand that would necessitate a new charter; a change in the corporate form of the Pennsylvania Railroad would necessitate a new charter.

I have here a statement of the tonnages produced by the Carnegie Steel Co., showing the production of pig iron, ferro-manganese, ingots, etc., for the years 1910 and 1911, furnished me by Mr. Filbert, the comptroller. It has no connection with this, but I will put it in the hearing at this point.

The statement referred to is attached hereto, marked "Exhibit A."

The Chairman. I have here an extract from "Statistics of Railways in the United States, 1910" in the report of the Interstate Commerce Commission, pages 59, 60, and 61, prepared by Mr. Mannington. If there is no objection, I will put it in.

The extract referred to is attached hereto, marked "Exhibit B."

The CHAIRMAN. Mr. Wood, the committee, is very grateful to you for your very valued and candid testimony.

Mr. WOOD. I am very glad to have been of any service to you. Are you through with me?

The CHAIRMAN. Yes; we are through with you.

Mr. WOOD. Thank you.

The CHAIRMAN. We will adjourn subject to the call of the chair.

Whereupon, at 4 o'clock p. m., the committee adjourned subject to the call of the chair.

EXHIBIT A.

UNITED STATES STEEL CORPORATION,
OFFICE OF THE COMPTROLLER,
New York, March 11, 1912.

Hon. A. O. STANLEY,
Chairman, Special Committee to Investigate Violations
of the Antitrust Act of 1890, and Other Acts,
Washington, D. C.

SIR: In response to your letter of the 2d instant, I inclose statement which I think furnishes the information you want. In this connection I beg to point out that a statement of production made for any one subsidiary company must necessarily be on different lines from one made for all companies combined. The table in the annual report gives in respect of rolled and finished products only the tonnage made for sale by all subsidiary companies as a unit to outside customers; it does not presume to give the tonnage sold from one subsidiary to another for further finishing. Therefore, in a production statement for any one company the last-named tonnage should be shown in order to tell the whole story. This has been done in the inclosed table.

Yours, truly,

W. J. FILBERT, *Comptroller.*

Carnegie Steel Co. production, years 1910 and 1911.

Products.	1910	1911
Blast-furnace production:	*Tons.*	*Tons.*
Pig iron	6,102,261	5,598,634
Spiegel	36,242	28,529
Ferro-manganese and silicon	78,511	76,507
Total	6,217,014	5,703,670
Steel-ingot production:		
Bessemer ingots	2,727,593	2,343,319
Open-hearth ingots	4,565,757	4,227,694
Total	7,293,350	6,571,013

Carnegie Steel Co. production, years 1910 and 1911—Continued.

Products	1910		1911	
	For sale outside of United States Steel organization.	For sale to other subsidiary companies of United States Steel Corporation for further finishing by them.	For sale outside of United States Steel organization.	For sale to other subsidiary companies of United States Steel Corporation for further finishing by them.
Rolled and other finished products:	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Steel rails (heavy and light tee)	528,639	5,914	434,212	5,387
Blooms, billets, slabs, sheet and tin plate bars	541,266	1,267,589	753,856	1,252,995
Plates	718,863	248,427	472,324	230,347
Heavy structural shapes	409,650	158,675	351,862	112,248
Merchant steel, bars, hoops, bands, skelp, etc	1,276,817	101,517	1,005,665	55,396
Finished structural work	8,562		8,256	91
Angle splice bars and all other rail joints	63,768		42,388	297
Spikes, bolts, nuts, and rivets	722		742	7
Axles	89,634		45,565	
Steel car wheels	98,105		36,652	51
Sundry steel and iron products	80,245	745	67,541	443
Total	3,816,271	1,782,867	3,219,063	1,657,262

MARCH 8, 1912.

EXHIBIT B.

[Extract from "Statistics of Railways in the United States, 1910," in the Report of the Interstate Commerce Commission, pp. 59, 60, and 61.]

Typical or average haul in the United States in 1910 . . . miles	130. 87
Freight revenue per train mile in the United States in 1910	$2
Freight revenue per mile of road in the United States in 1910	$5, 466
Ratio of operating expenses to operating revenue in the United States in 1910, per cent	66. 29

No. 57

UNITED STATES STEEL CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

WEDNESDAY, MARCH 27, 1912

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

UNITED STATES STEEL CORPORATION.

Committee on Investigation of the
United States Steel Corporation,
House of Representitives,
Wednesday, March 27, 1912.

The committee this day met, Hon. Augustus O. Stanley (chairman) presiding.

The Chairman. I have a memorandum from Mr. Hill as to a slight clerical error in his testimony, to which he calls the attention of the committee and asks to have a correction made.

You may insert this memorandum at this point, Mr. Stenographer.

The memorandum referred to is as follows:

On page 3245, third line from foot of page, of No. 49, February 13, 1912, of hearing before Stanley committee hearings on Steel Corporation, Mr. J. J. Hill is made to say:

> Mr. Hill. I had to raise in three months about $90,000,000. If I did not those properties would have been welded in with the Northern and Southern Pacific, etc.

This should be "Union and Southern Pacific," etc.

STATEMENT OF MR. JULIAN KENNEDY.

The witness was duly sworn by the chairman.

The Chairman. Mr. Kennedy, what is your profession?

Mr. Kennedy. Mechanical engineer.

The Chairman. How long have you been engaged in that business?

Mr. Kennedy. Twenty years.

The Chairman. Have you ever designed or constructed any blast furnaces or rolling mills?

Mr. Kennedy. Yes.

The Chairman. Did you design and construct any of the blast furnaces now owned and operated by the United States Steel Corporation?

Mr. Kennedy. Yes; some at Braddock, the Edgar Thompson works; some at Donora; some of the Ohio works at Youngstown. I have also consulted and advised on many other plants which now belong to the Steel Corporation, in connection with the construction.

The Chairman. For whom were those blast furnaces to which I have referred constructed?

Mr. Kennedy. Some at the Edgar Thompson works for the Carnegie Bros. & Co. (Ltd.); Youngstown, for the Ohio Steel Co.; Donora, for the Union Steel Co. I also aided in designing at South Chicago for the Illinois Steel Co., and at Joliet and at other places where I have been consulted.

The CHAIRMAN. Have you ever constructed rolling mills and furnaces, open-hearth and others, for the making of steel?

Mr. KENNEDY. Yes, sir.

The CHAIRMAN. Did you construct any furnaces for the Steel Corporation?

Mr. KENNEDY. I constructed some at the Homestead works when I was manager there; also at Bessemer plant at the Ohio works for the Ohio Steel Co.

The CHAIRMAN. You spoke of being manager there. That is, manager for the Carnegie Steel Co.?

Mr. KENNEDY. For Carnegie, Phipps & Co.

The CHAIRMAN. How long did you occupy that position?

Mr. KENNEDY. Three years at Homestead.

The CHAIRMAN. Roughly speaking, what was the capacity of these blast furnaces which you constructed?

Mr. KENNEDY. Four hundred to five hundred tons per furnace. I do not remember the number now. It has gotten beyond me.

The CHAIRMAN. Do you know the capacity of the rolling mills?

Mr. KENNEDY. No; I do not. I have not paid much attention to that of late.

The CHAIRMAN. I have a statement of the Commissioner of Corporations——

Mr. REED (interposing.) At what page, Mr. Chairman?

The CHAIRMAN. Page 360—giving the total capacity of the blast furnaces of the Steel Corporation and of the independents.

Can you turn, Mr. Reed, to the page of this report that gives the capacity of the corporation? I had it here and thought I could turn my hand to it.

Roughly speaking—and I will correct this in the record if I am in error—the capacity of the Steel Corporation's plants is in excess of 16,000,000 tons.

Mr. REED. Of what?

The CHAIRMAN. Pig iron.

Mr. REED. I do not think so, Mr. Chairman.

The CHAIRMAN. That is my recollection.

Mr. REED. 1907, I believe, was the biggest year of production, as I remember it, and in that year they made 10,633,000 tons of pig iron, and in 1910 the production had gotten up to 11,657,000 tons.

The CHAIRMAN. I am talking about the total capacity; not what they make, but their capacity to make if they ran full.

Mr. REED. I think they were running pretty nearly to their total capacity in 1910.

Mr. YOUNG. The statement was made by Mr. Farrell that the total capacity of the country in pig iron is now 40,000,000 tons.

The CHAIRMAN. I thought I had those statements where I could turn to them.

Mr. REED. Mr. Farrell knows what he is talking about. I am like Mr. Brandeis—I am just telling hearsay.

The CHAIRMAN. Is there any economy, Mr. Kennedy, in operating these large plants, like a blast furnace, to their total capacity, and how is that with reference to a rolling mill?

Mr. KENNEDY. In a general way, yes; to the reasonably full capacity. In crowding a plant to its utmost capacity, sometimes the cost runs up a little.

The CHAIRMAN. What is the effect of an excess of unused capacity in normal times?

Mr. KENNEDY. I do not know that I understand exactly what you mean.

The CHAIRMAN. I mean economically considered, to have a mill run about 60 per cent of its full capacity, is it economical?

Mr. KENNEDY. I should say a mill running 60 to 80 per cent of its capacity would be fairly economical, not quite as economical as its full capacity, but to take care of fluctuating demands it would be undoubtedly wise to have a little more capacity than required under the average normal conditions.

The CHAIRMAN. There has been a great deal of testimony here about fluctuations in the prices of steel products. Under a heavy demand the prices go up, and in dull times the prices go down; and as Mr. Carnegie said, the steel man is either a prince or a pauper.

Mr. BARTLETT. Here are the figures you wanted, Mr. Chairman.

The CHAIRMAN. I see that I remembered correctly the total capacity of the United States Steel Corporation was 16,000,000 tons, as shown at page 269 of the report.

Mr. YOUNG. That would be about 40 per cent of the total capacity, according to Mr. Farrell.

The CHAIRMAN. I will get back to that question later.

It has been claimed, Mr. Kennedy, that it is necessary to enter into agreements touching prices or to have some understanding touching prices in order that there may be stability in the prices of steel products. Do you know of any other cause or any other remedy for this variation and fluctuation in prices than the fixing of prices by those contracts?

Mr. KENNEDY. I have felt for many years that the extreme fluctuations, such as those spoken of by Mr. Carnegie, which were more pronounced 14 or 15 years ago than they are to-day, were caused largely by having too high a tariff on some articles. I remember that about the year 1898 or 1899 the industry in wrought-iron or wrought-steel tubing was in very bad condition. Competition had brought it to a state where they were all very much discouraged and where they got together to form a combination of all the people to try to get some profit out of it.

My own opinion is that that was largely caused by the placing of a tariff too high on pipe, the tariff at that time being $40 per ton.

I think a more moderate tariff would have allowed some foreign goods to come in to stop extreme demands and would have steadied the market and prevented an overbuilding of works all over the country.

The CHAIRMAN. Explain how a lower duty on these various products would tend to equalize those prices?

Mr. KENNEDY. A lower duty at that time, I think, would have allowed some material to have been brought in from abroad when prices ran away, so to speak, and would have steadied the market.

On the other hand, when the tariff is put so very high that nothing at all can come in from abroad a sudden expansion of demand puts the prices up to an exorbitant figure—an abnormally high figure—and then a lot of people build works as rapidly as possible to get some of that fancy profit, which then sends prices away down into the valley again, where none of them make any profit, and there comes bitter competition.

The CHAIRMAN. Speaking of this building of plants for any purpose until you have an excess of production over a normal demand, I find that the production, given by Herbert Knox Smith in his report at page 363, of pig iron, for instance, by the Steel Corporation in 1910 was eleven million and odd tons. Their production for the year ending July 1, 1911, was 16,000,000 tons——

Mr. REED (interposing). Their capacity, you mean, was 16,000,000 tons?

The CHAIRMAN. They had a capacity for 16,000,000 tons of pig iron and produced only 11,000,000 tons.

What is the effect of this potential capacity upon competition, outside of its effect on economical operations?

Mr. KENNEDY. I do not know that this has any particular effect at the present time, because the Steel Corporation has endeavored, as I understand it, to prevent wide fluctuations as much as possible, and has shown a disposition to sell sometimes at prices——

The CHAIRMAN. I did not make myself sufficiently clear. What effect has it upon potential competitors, upon an effort on the part of independent companies, to antagonize this power to supply, say, instead of 50 per cent of the production of pig iron, 70 per cent or 80 per cent? For instance, if the Steel Corporation runs at full capacity, it could supply 80 per cent of all the pig iron used in this country. Has that any moral effect upon other persons not in the Steel Corporation, but engaged in the production of pig iron?

Mr. KENNEDY. Yes; I think it would make other persons a little cautious about antagonizing the Steel Corporation needlessly.

Mr. REED. The same figures show that if the independents ran at full capacity they could supply more than 100 per cent of the country's consumption of pig iron. Will you ask Mr. Kennedy what effect that would have?

The CHAIRMAN. What effect would that have on the Steel Corporation?

Mr. KENNEDY. None at all, I think. [Laughter.]

The CHAIRMAN. You started to explain something about the tariffs on tubes and I interrupted you.

Mr. KENNEDY. The tariff on tubes was $40 per ton, which was practically a Chinese wall, and the tube people were small in numbers for a while and their profits got very abnormal and very fancy, and a great many other people jumped into the tube business. It is a business that is not necessarily very highly organized, and men could get in very quickly and with a small amount of capital, if necessary; so a great many tube plants started. Some of them were small, but all were active, and we got an overproduction and business became very much demoralized, as I noticed. I had occasion to go around all the tube plants about that time and examine them.

The CHAIRMAN. Explain what that occasion was.

Mr. KENNEDY. The tube people wanted to get together, as I understand it, with a view to ending this condition of affairs, and they entered into negotiations with J. P. Morgan & Co., of New York, to combine them into a larger company, and I was——

Mr. BARTLETT (interposing). When was that—1899?

Mr. KENNEDY. About that time, I think; 1898 or 1899. I can not fix it exactly. It was just prior to the formation of the National Tube Co., whenever that was.

I visited all the works, and naturally talked with all the people, and found them very much discouraged. The competition was getting wild at that time, and it was in such a shape that no one could blame them for wishing to get out at that time. Nobody was making any money and they were being chiseled very hard by purchasing agents. Contracts were being made for a year's requirements, and if prices went up the requirements were large and if prices went down the requirements were small. Generally it was a buyers' market, as we call it, and the tube people were very much in the blues.

Mr. BARTLETT. You say it was a buyers' market. Do you mean by that the buyer could——

Mr. KENNEDY (interrupting). The buyer could pretty nearly dictate his own price at that time.

Mr. BARTLETT. They had an overproduction?

Mr. KENNEDY. Yes, sir; and an overbuilding of plants.

Mr. BARTLETT. That overbuilding of plants and overproduction was due to the stimulation of business by the high protective tariff, you think?

Mr. KENNEDY. Yes; I think if the tariff had been about the natural difference in cost between pipes here and abroad there would not have been nearly so many plants built.

Mr. BARTLETT. Do you know whether during that time foreign prices went up? Do you know what the foreign market was and the prices in the foreign market for American-produced tubes during that time?

Mr. KENNEDY. No; I do not know exactly; but the price for tubes in this country was very low, and there could not have been very much difference between it and the foreign market.

Mr. BATLETT. Do you know anything about what the foreign markets paid for American-made product during that time?

Mr. KENNEDY. No.

Mr. BARTLETT. Then the effect of that prohibitive tariff was to increase competition between the manufacturers of the product protected?

Mr. KENNEDY. It was in that case.

Mr. BARTLETT. Was that the general result?

Mr. KENNEDY. Yes.

Mr. BARTLETT. Where there is no combination as to prices?

Mr. KENNEDY. Yes; that is the general tendency, of course.

Mr. BARTLETT. Then, where the tariff is so high as to be prohibitive and thus increases and stimulates production of the product protected the tendency is to increase the desire to combine among the producers of the product protected?

Mr. KENNEDY. Yes; if the tariff is so high nothing can come in, we are liable to have alternate extremely high prices and extremely low prices, and during the periods of very high prices lots of people will start in and construct plants, especially if they are plants that can be constructed in a short time.

Mr. BARTLETT. When the manufacture gets to such an extent as the result of the stimulation of the high tariff, and the producers are compelled to compete to such a degree as to get the market in the condition where it is buyers' market, they necessarily resort to the method of combining in order to control prices, do they not?

Mr. KENNEDY. The tendency is that way; yes, sir.

Mr. BARTLETT. Do you attribute that result mainly to the prohibitive tariff.

Mr. KENNEDY. I did at that time; yes.

The CHAIRMAN. You say you were making a careful inspection of all the tube works in this country. At whose instance did you do that?

Mr. KENNEDY. In connection with another gentleman employed by Messrs. J. P. Morgan & Co., of New York.

The CHAIRMAN. You were employed by J. P. Morgan & Co., of New York, to appraise the tube works of this country?

Mr. KENNEDY. Not to appraise, exactly.

The CHAIRMAN. To fix a valuation?

Mr. KENNEDY. The works were not bought on that valuation, but to give our opinion as to valuation as a guide to it, as I understood it.

The CHAIRMAN. Did you give an opinion as to the valuation of these properties, all things considered?

Mr. KENNEDY. Yes.

The CHAIRMAN. What was the valuation of the National Tube Works at that time?

Mr. KENNEDY. I would rather not give that. I think Messrs. Morgan & Co. undoubtedly would furnish that if asked for it.

The CHAIRMAN. Mr. Morgan stays in Egypt or some other seaport, unfortunately for us.

I do not want to press you, but was it in excess of $19,000,000?

Mr. KENNEDY. I should say not.

The CHAIRMAN. They were only capitalized for $80,000,000.

Mr. REED. Mr. Kennedy appraised only the plants.

Mr. KENNEDY. I only appraised the plants, and considered them as going plants, including the expense of starting and organization, but nothing for good will or possible effects of combination. That was distinctly left out.

The CHAIRMAN. What was the effect on prices following this combination?

Mr. BARTLETT (interposing). You said something about good will. You did not appraise that?

Mr. KENNEDY. I did not appraise the good will. I simply took the physical value of the plants as going plants, including cost of construction and cost of starting—the diseases of infancy, which are part of the cost of construction.

The CHAIRMAN. Explain the difference between the valuation you made and the mere physical valuation and cost of reproducing.

Mr. KENNEDY. The valuation we made was a little higher, because anybody reproducing that plant would have to run it almost for a year in getting the organization perfected and the machinery adjusted, which is part of the construction cost, although not always considered that.

Mr. REED. You did not include quick assets, did you?

Mr. KENNEDY. No.

Mr. REED. Cash or securities?

Mr. KENNEDY. No.

The CHAIRMAN. Did these plants have an ore or anything of that kind you did not appraise?

Mr. KENNEDY. I think not. We did not consider that, anyway.

The CHAIRMAN. Mr. Herbert Knox Smith's report puts it at $14,000,000.

Mr. REED. It is anybody's guess.

The CHAIRMAN. Was this tube company formed immediately after you appraised it, or a short time afterwards?

Mr. KENNEDY. A very short time afterwards, as I remember it.

The CHAIRMAN. What was the effect of this demoralization of prices following this organization?

Mr. KENNEDY. I do not remember, exactly.

Mr. BARTLETT. You mean the National Tube Co. was formed?

The CHAIRMAN. Yes.

Mr. KENNEDY. Prices went up, however.

The CHAIRMAN. Do you know to what extent?

Mr. KENNEDY. No; I do not know to what extent.

The CHAIRMAN. It appears that company had enormous earnings shortly afterwards.

Do you know what per cent of the tube business was included in this organization, approximately?

Mr. KENNEDY. I do not know exactly, but it was nearly all. There were one or two works that did not conclude to come in. The Spang works are one that I remember now.

Mr. REED. How about the Buyers?

Mr. KENNEDY. That is not included.

Mr. REED. About 75 per cent, wasn't it?

Mr. KENNEDY. I should have said 90 per cent, but I would not be positive.

Mr. BEALL. Was the effort made to get all of them in?

Mr. KENNEDY. The Spang plant was considered, and I think possibly the Buyers. I do not know that there was any great effort. I think the prices were not quite satisfactory, and some of them were omitted.

Mr. BARTLETT. Does he set out what became of them? Did they do a good business afterwards?

Mr. KENNEDY. Yes; very good.

The CHAIRMAN. It appears that the Steel Corporation has purchased and dismantled quite a number of plants during the last 10 years and has constructed an entire set of large units in Pittsburgh, Cleveland, Gary, etc.

Mr. REED. May I interrupt you, Mr. Chairman? Where does that appear?

The CHAIRMAN. On page 4360, Document T, furnished by the Steel Corporation, set forth in the third part of Mr. McRay's report.

Mr. YOUNG. Is that third part printed?

The CHAIRMAN. Yes.

Mr. YOUNG. I did not get my third part.

The CHAIRMAN. Didn't you get yours?

Mr. YOUNG. No; I have not got the third part. Was the fourth part printed?

The CHAIRMAN. No; not yet.

Mr. Reed. That Document T to which you refer does not mention any plants purchased since the organization of the Steel Corporation which have been abandoned or dismantled. As a matter of fact, the statement which I furnished this morning shows that the Steel Corporation has not bought any plant since 1901 which was dismantled.

The Chairman. I will modify the question.

Immediately after the organization of the Steel Corporation—these plants purchased after July, 1901, were purchased a year or so afterwards, I believe, or possibly some of them a year or so before. They were purchased by the American Bridge Co., which was organized, as I understand, in 1899.

Mr. Kennedy. That is correct.

The Chairman. And abandoned shortly after.

Mr. Reed. The American Bridge Co. abandoned only one plant in 1901.

The Chairman. And in 1902 and 1903 and 1904 it abandoned a number of plants.

Mr. Reed. It did not abandon any in 1902.

The Chairman. I see I am looking at the wrong page.

The American Bridge Co. in 1903 and 1904 abandoned six plants—that is, in 1904.

I will ask if the Groton Bridge Co.'s plant has been dismantled by the United States Steel Corporation? Do you know anything about that plant?

Mr. Kennedy. I have seen the plant. I do not know much about it. I do remember it was quite a small plant out in the country.

The Chairman. The Buffalo Bridge & Iron Works?

Mr. Kennedy. I am not familiar with that plant.

The Chairman. The Pittsburgh Bridge Co.?

Mr. Kennedy. That was a pretty good plant, as I remember it; not a very large one, but it was a good plant.

The Chairman. Is it necessary a plant should be very large and have an enormous capacity and be integrated in order to economically assemble structural material?

Mr. Kennedy. No; it is not necessary to be extremely large. A moderate-size plant does very well on that kind of work within its range of sizes. It can not build as large work as a larger plant, of course.

The Chairman. Explain that to the committee in full. What is the operation in structural works or bridge works? What do they do with the material? What changes do they make in it?

Mr. Kennedy. They buy the rolled steel and punch it and rivet it and put it into buildings and bridges and erect it.

The Chairman. Can that be done with 30,000 or 40,000 or 50,000 tons as economically as if you got out from 100,000 to 200,000 tons?

Mr. Kennedy. Pretty nearly so, I should think, but not quite.

The Chairman. Do you know anything about the Youngstown Bridge Co.?

Mr. Kennedy. Yes; I have seen it. It was a small plant that did very fair work.

The Chairman. The Rochester Bridge & Iron Works?

Mr. Kennedy. I am not familiar with that.

The Chairman. The Keystone Bridge Works?

Mr. KENNEDY. They Keystone plant is quite an old plant. It belonged to the Carnegie interests, but it is understood their cost of manufacture is high there.

The CHAIRMAN. How about the Schiffler Bridge Co.?

Mr. KENNEDY. That is otherwise known as the Walker plant and is the one I spoke about as a very good little plant.

The CHAIRMAN. The Pittsburgh Bridge Co.?

Mr. KENNEDY. That I do not think was as good a plant as the Walker plant, but a very fair sort of bridge works.

The CHAIRMAN. It appears that instead of these dismantled plants larger units have been erected at Pittsburgh and other places. As an engineer, would it have been more economical to have erected these larger units in the beginning without acquiring these smaller ones?

Mr. KENNEDY. I suppose it would, if they could have gotten the American Bridge Co. without the small ones.

Mr. GARDINER. Do you think it would have been possible to buy the Carnegie Co. without buying the Keystone Bridge Co., which, I understood, was the first investment in steel made by Mr. Carnegie?

Mr. KENNEDY. No; I think not.

The CHAIRMAN. Mr. Gardiner, this belonged to an independent concern at the time the Carnegie Co. was acquired.

Mr. KENNEDY. The same principle would hold good.

The CHAIRMAN. I think the Keystone Bridge Co. belonged to the American Bridge Co. at the time the Carnegie Co. was acquired.

Mr. BEALL. So did the American Bridge Co. belong to it.

The CHAIRMAN. The American Bridge Co. was one of the subsidiary companies of the United States Steel Corporation. The The American Bridge Co. was subsidiary to the Carnegie Co.

What about that, Mr. Reed?

Mr. REED. It was not.

The CHAIRMAN. It was independent of the Carnegie Co. at the time is was acquired. I am quoting now from the list of companies that was acquired by the American Bridge Co. in 1900.

Mr. BARTLETT. Was not the Keystone Bridge Co. a part of the Carnegie Co.?

The CHAIRMAN. At one time, but it became a part of the American Bridge Co. in 1900.

Mr. BARTLETT. That is right.

The CHAIRMAN. So they did not have to buy the Carnegie Co. to get it.

Mr. GARDINER. It is in the list as belonging to the American Bridge Co.

Mr. BARTLETT. On page 107 of this corporation report——

Mr. GARDINER. The companies given are the Buffalo, Berlin, Carnegie, Carnegie Steel Co., Keystone Bridge Co., and others. You will find that is correct in that list.

The CHAIRMAN. It is given in the list here on page 3651 of this report, as follows:

> Arrangements were made by the American Bridge Co., of New Jersey, in May, 1900, to acquire a large number of plants, some of which were the following.

Then it gives this list.

Mr. Gardiner. But here is the list [indicating].

The Chairman. I am quoting from another report.

Mr. Gardiner. The Carnegie Steel Co. (Ltd.), which includes the Keystone Bridge Co., bridge and structural works, etc., as shown on page 107 of Herbert Knox Smith's report.

The Chairman. Do you know anything about the Pittsburgh Bridge Co., Mr. Kennedy?

Mr. Kennedy. Not much.

The Chairman. I started to ask about this concern. Would it have been economical and good business practice to construct these other units without taking over these other plants, either by the American Bridge Co. or by the United States Steel Corporation?

Mr. Kennedy. No; I do not think it would have been good business policy to leave those plants out as competitors.

The Chairman. Explain.

Mr. Kennedy. It would have been pretty hard to have gotten good prices for bridges with so many independents competing.

The Chairman. As I understand you, if the Steel Corporation had left these companies out and had built plants for use as a bridge company, these companies would still have competed with them?

Mr. Kennedy. Undoubtedly.

The Chairman. Explain that. Could they have produced bridge materials much cheaper with their large integrated plant?

Mr. Kennedy. Not a great deal cheaper.

The Chairman. Explain that.

Mr. Kennedy. There is not much manufacturing in a bridge plant. There is not much chance for one works to do it cheaper than another. It is an assembling proposition, holes to punch and rivets to drive, and one plant will not manufacture much cheaper than any other, or not to the same extent as would apply in a great many other industries where the large plant would manufacture much cheaper than the small plant.

The Chairman. The only way in which the prices of bridges and structural materials could be maintained would have been to take over these concerns, whether they were dismantled or not?

Mr. Kennedy. I think so; yes.

The Chairman. You spoke about constructing a blast furnace for the Union Co. Do you know anything about the Union plant and the Sharon plant?

Mr. Kennedy. Yes; I knew the Union plant quite well.

The Chairman. Do you know anything about its capacity in pig iron about the time it was acquired by the United States Steel Corporation?

Mr. Kennedy. Only in a very general way. They had, I suppose, about 2,000 tons pig-iron capacity.

The Chairman. Do you know about the Sharon plant?

Mr. Kennedy. In a very general way. I am not very familiar with it. It was quite a considerable plant, however, and equipped for wire and pipe.

The Chairman. Where were those plants located?

Mr. Kennedy. The Union was at Donora, up the Monongahela Valley above Pittsburgh some distance, and the Sharon, at Sharon, Pa., about 50 or 60 miles from Pittsburgh. The Union furnaces were not quite ready to operate when they were turned over.

The CHAIRMAN. Have you ever examined the contract under which the Union and Sharon companies were acquired by the Steel Corporation?

Mr. KENNEDY. Only to read it hastily.

The CHAIRMAN. Shortly before this corporation was acquired, the United States Steel Corporation underwrote bonds and issued stock, I believe, in the sum of about $65,000,000. What would you say was the value of those plants?

Mr. REED. Who did you say issued that stock?

The CHAIRMAN. The Steel Corporation.

Mr. REED. The Steel Corporation did not issue any stock.

The CHAIRMAN. It underwrote the bonds and took over the plant.

Mr. REED. That bond issue was $45,000,000 instead of $60,000,000.

The CHAIRMAN. And the total issue was about $65.000,000.

Mr. GARDINER. Where does the chairman get that?

The CHAIRMAN. I get it from the minutes and from the contract.

Mr. GARDINER. Before the chairman leaves that subject I wish he would give me a reference to that.

The CHAIRMAN. I am asking what is the value of that property?

Mr. GARDINER. This is the second time you have asked that question.

Mr. BARTLETT. Page 283 of Herbert Knox Smith's report will show it.

Mr. GARDINER. I am referring to the question where the chairman says it was $65,000,000. He says here the cost of the Union & Sharon Steel Co. was given, and the United States Steel Corporation guaranteed an issue of $45,000,000 of the Union Steel Co. bonds. That is all I can see, but the chairman will give me, without doubt, a reference to the $65,000,000 figure.

The CHAIRMAN. I am quoting it from memory.

Mr. REED. We wrote the bond issue, and I am sure it was $45,000,000.

The CHAIRMAN. There was $45,000,000 of bonds, but I think there was some stock.

At page 3643 of the record in this hearing it says:

> A comparison of this amount of $75,860,501 paid and guaranteed for the Union-Sharon properties, with the valuation of the property of the seven large so-called independent steel concerns four years latter, in 1907, is illuminating.

Mr. GARDINER. That does not correspond with Herbert Knox Smith's figures. I have the chairman's statement and it is the same as Herbert Knox Smith's statement, that it cost $45,000,000 of bonds guaranteed.

Mr. BEALL. I was reading from page 3660, at the bottom of the page.

Mr. YOUNG. Apparently there was a stock issue.

Mr. GARDINER. That shows what the minutes authorized. It does not show what the transaction was.

The CHAIRMAN. If you will turn to the third volume you will find a contract written there.

Mr. GARDINER. I think the chairman is mistaken.

The CHAIRMAN. Look at document K, in the third volume.

Mr. Reed. You will find it at page 4348, Mr. Gardiner.

The Chairman. They were to increase the capital stock $20,000,000 and issue $45,000,000 of bonds. That is found at page 3641, in the first volume of McRae's report. It says there:

> In this agreement of December 15, 1902, the United States Steel Corporation agrees that the men above named are to go ahead with the merger of the Union and Sharon companies and increases the capital stock to $20,000,000 and issue $45,000,000, and the agreement then continues:
>
> "Upon the organization of unions, as herein provided, the vendors agree to sell and transfer unto the steel company, and the steel company agrees to buy all of said $20,000,000 of the capital stock of Union. In consideration thereof and contemporaneously with said transfer the steel company hereby agrees that it will duly and legally guarantee the payment of the principal and interest of all of said $45,000,000 of bonds of Union as the same shall respectively become or be made due and payable according to the terms of said bonds."

That looks to me like a $65,000,000 capitalization.

Mr. Reed. But you said $65,000,000 bond issue.

The Chairman. No; I said bond issue and stock.

What I am trying to get at, Mr. Kennedy, is what was approximately the value of that plant.

Mr. Young. That includes the Union and Sharon?

The Chairman. Yes.

Mr. Kennedy. I could not say. They had ore property on Lake Superior, which I never saw, and large coal holdings in the Connellsville district with which I was only generally familiar.

Mr. Gardiner. Excuse me a moment, Mr. Chairman, before we pass that discussion.

I want to read into the record a statement made by Herbert Knox Smith, at page 282 of his report, showing the cost of the Union-Sharon steel property, in the second paragraph, as follows:

> The aggregate cost of the fixed properties was assessed by the corporation at $30,860,501. Payment was made in the following manner: Bonds of United States Steel Corporation, $29,000,000; underlying bonds assume, $3,500,000; cash, $500,000; total, $33,000,000.

I have left off the odd dollars.

> Assets acquired, $2,500,000 of properties; total cost of the six properties, $31,000,000 approximately.

Mr. Reed. You will notice immediately following that the statement that that price was reached by getting the exact cost of the manufacturing plant.

The Chairman. And in that connection I would like to read this into the record from Herbert Knox Smith's report:

> There can be no question that the prices paid by the Steel Corporation for both the coal and the iron ore properties were considerably in excess of a fair valuation at the time of the transfer. The real significence of the transaction seems to be that the Steel Corporation desired to eliminate the competition of certain influential interest back of the union concern, particularly that of Mr. Frick, and that the amount necessary to induce these owners to retire from such competition was, in effect, charged against the ore and coal.

Mr. Gardiner. The chairman, of course, misses my whole point. I am not trying to show these were not absorbed at too high a price. I objected to the chairman, in the question addressed to the witness, making a record for himself without giving the source of his information.

The Chairman. I am perfectly willing to give the source.

Mr. Gardiner. That is what I am trying to find out.

The Chairman. I simply stated, as appears in the record, that it was capitalized at $65,000,000.

Mr. Gardiner. As the gentleman read the modification of the United States Steel Corporation contract?

The Chairman. I think I read all of it. I have not been able to study it yet, but I have read it over carefully and I do not see anything in it.

Mr. Gardiner. Have you read it over carefully?

The Chairman. Yes.

Mr. Gardiner. What does it show? Was the chairman aware there was a modification?

The Chairman. Oh, there were——

Mr. Gardiner. Was the chairman aware there was a modification of that contract?

The Chairman. What modification do you refer to?

Mr. Gardiner. At page 4355 of the record, beginning as follows:

> Whereas the parties hereto, etc.

The Chairman. There was one proposition where they agreed to furnish so many million dollars for operating the concern.

Mr. Gardiner. I have not been able to puzzle this out as yet. I thought perhaps the chairman would be able to tell me in what way the contract was modified.

The Chairman. There is a modification to the extent that they agree to furnish working capital or a certain amount of working capital.

Mr. Gardiner. That is not the modification to which I allude.

The Chairman. I do not know what you are talking about then.

Mr. Gardiner. I thought the chairman did not. That is why I asked if he had ever read it.

The Chairman. I have read the contract.

Mr. Gardiner. But I doubt if you have read the modification.

The Chairman. I think I have read the whole thing. I am willing to be cross-examined on it.

Mr. Gardiner. The modification to which I have reference reads as follows:

> Whereas the parties hereto did heretofore enter into an agreement with the United States Steel Corporation, dated December 15, 1902, for the sale, upon the plan therein set out, of certain properties to the Steel Corporation, and in said agreement it is provided that in the organization of the Union Steel Co. a division of the bonds to be received is to be made as between Union and Sharon upon the basis of $12,945,000 of the bonds to Sharon and $22,055,000 to Union, and since execution of said paper it has been discovered that the calculation in reaching said figures was erroneous and the true amounts should be $12,887,000 to Sharon and $22,113,000 to Union, and the parties have mutually agreed that said error shall be corrected, etc.

I have read far enough to be convinced that the modification did not substantially modify the contract.

The Chairman. I will say to Mr. Gardiner that I read the contract with this idea in view to see what the capitalization was, and if I could find out any reason for it other than the reason assigned by the parties, and I found nothing in the contract to indicate that, although it is doubled and twisted in every way.

Mr. GARDNER. Has the chairman or any of his employees communicated with Mr. Herbert Knox Smith to find out how this discrepancy of about $35,000,000 arises between Herbert Knox Smith's report and the chairman's statement?

The CHAIRMAN. As to the Sharon business?

Mr. GARDNER. Yes.

The CHAIRMAN. Oh, no.

Mr. GARDNER. In other words, you do not care what the fact is, so long as you think you are right?

The CHAIRMAN. I had the contract itself, and I think Mr. Herbert Knox Smith had no better authority than that written instrument.

Mr. GARDNER. He has given us about the only accurate information we have had so far, and it is fair to suppose——

The CHAIRMAN (interposing). I am glad you think so well of Mr. Smith.

Mr. GARDNER. I think very highly of him.

The CHAIRMAN. So do I, but I do not know that the chairman is under any sort of obligation to go to school to him.

Mr. BARTLETT. Mr. Chairman, I desire to make a point of order. I do not think this controversy is seemly. The chairman is not on the stand for cross-examination.

The CHAIRMAN. It is hardly courteous, but the chairman is not particular about it.

Mr. DANFORTH. Let me ask a question, if I may do so without the risk of being discourteous.

The CHAIRMAN. You may take any chances with the chairman.

Mr. DANFORTH. I am a little timid about it.

This contract seems to state that there were only about $33,000,000 or $34,000,000 of these bonds ever issued, whereas you talk about $45,000,000.

The CHAIRMAN. What is your question?

Mr. DANFORTH. Where does that appear?

The CHAIRMAN. In the report.

Mr. DANFORTH. I have not seen this report until just a few moments ago. It is a little difficult to keep track of a report that we have not yet seen.

The CHAIRMAN. Mr. Kennedy, I have a statement here furnished me by the Steel Corporation itself, in which it gives the Sharon mine holdings as follows: Non-Bessemer, 15,000,000 tons, in round numbers; siliceous at 1,524,351.

Mr. YOUNG. Does it state where those ores are?

The CHAIRMAN. The Sharon mines, the Champion, the Little & Prindle, and St. Clair mines.

Mr. YOUNG. Does it give a separate estimate of the ores in each?

The CHAIRMAN. It does not give any estimate.

Mr. Herbert Knox Smith makes an estimate of the value of these ores. I think he states they originally purchased coal mines at $150,000, the iron ore at $1,176,000, of the Clairton and the Sharon. Taking the ore holdings at the commissioner's estimate of $1,176,000, what would you say to a capitalization of $65,000,000 for the Union-Sharon works?

Mr. KENNEDY. That would depend on how much went in for ore.

The CHAIRMAN. That is an estimate of what the ore was actually worth. I think the ore was estimated at——

Mr. **Reed** (interrupting). Mr. Chairman, the place you are reading from as to the estimate of $1,176,000 is Steel Corporation's own estimate of the value of the Steel Co. ore.

The **Chairman**. I understood it was both.

Mr. **Reed**. No; that has nothing to do with the Union Steel Co. The Union Steel Co. was taken in two years before that.

The **Chairman**. I will correct that. The Sharon mine and equipment and the Donora mine and equipment—they are both mines of the Union Steel Co.?

Mr. **Reed**. Yes.

The **Chairman**. That estimate by the corporation, as I understand from this report, was $8,550,607. That estimate the commissioner claims to be excessive. The highest ascertained price for coking coal, says the commissioner in this report, was $500 per acre for 3,000 acres purchased by the Clairton Steel interests in November, 1902. The report goes on to say:

> The average price in this and two other fairly large purchases about this time was almost exactly $560 per acre, or $233 per acre less than the average price paid by the Steel Corporation for the three parcels above described. As these latter comprised altogether practically 6,200 acres, the excess paid by the Steel Corporation over the average price paid in the other three transactions mentioned amounted, in round numbers, to $1,450,000. This amount may be considered as indicating, in a rough way, the excessive valuation placed on these properties in this transaction, since the other purchases above noted were made at just about the same time. This amount, however, would not represent the entire profit of the Union-Sharon interests on this coal property, since they probably acquired most of it at much less than $560 an acre.

The Clairton ore property was estimated at $1,176,000, so you would have about $10,000,000 as an estimate placed by the Steel Corporation upon the ore property. That is Schwab's idea of practically $1 a ton for the ore.

Mr. **Young**. That would not be true according to this estimate.

The **Chairman**. How many tons have they got?

Mr. **Young**. About 23,000,000, roughly.

Mr. **Reed**. About 40 cents a ton, that would be.

Does it appear there that the Champion was a part of this same purchase?

The **Chairman**. I do not know whether it appears from Herbert Knox Smith's report or not.

Mr. **Young**. They class it in this statement.

The **Chairman**. I do not recall. Is the Champion one of the union plants there in that classification?

Mr. **Young**. They put it in as Clairton. If the Champion is really part of the Clairton, and if Herbert Knox Smith's estimate of the total is $1,000,000, it is simply absurd, if the Champion is part of it.

The **Chairman**. I do not know about that.

Mr. **Reed**. On the valuations of that coal, Mr. Chairman, Mr. Herbert Knox Smith has not taken into account the very large rise in the price of coking coal which is now selling for several hundred dollars an acre more than the Steel Corporation paid for it in 1904.

The **Chairman**. I am not criticizing Mr. Smith's report. I read it with the most intense interest. I would not criticize it, but I am not basing this investigation upon the theory that Mr. Smith's report is either correct or incorrect. I simply call attention to these figures for the purpose of forming a rough estimate in order that the witness may draw certain conclusions in the event that that is approximately correct. I may be mistaken. Mr. Herbert Knox Smith's report shows that he draws conclusions that I have not drawn. He makes the claim or came to the conclusion in the first volume that the Steel Corporation had a monopoly of the coke or coal. I am not of that opinion. He may be better advised than I am. I must determine that for myself.

Mr. Young. I would like to say as to these remarks by Mr. Gardiner that while the chairman might have found this report of Herbert Knox Smith's department, I would not want to follow it entirely, and I could not follow it entirely. In many cases he is wrong.

The Chairman. I do not presume Mr. Smith is absolutely infallible.

Mr. Young. I think it is very illuminating.

The Chairman. What I said with reference to Mr. Gardiner—he left the room some little time ago—was said in a jocular way. I know he meant no discourtesy to the chairman in his remarks, and what I said was in a jocular way, and sounds worse than it was really meant to sound.

Mr. Kennedy, the committee has got to chatting upon other matters, and I have failed to get your reply. Did you form an estimate of whether that valuation is excessive or not from the data we have given you?

Mr. Kennedy. $8,550,000 is what they paid for the ore.

I could not form any estimate. I understand that gives a handsome profit on the ore, but it must be remembered that coupled with that was an agreement of certain very able men to keep out of the steel business for 10 years.

The Chairman. Who were those men?

Mr. Kennedy. Mr. Mellon, Mr. Donner, Mr. Flinn, Mr. John Stevenson, Mr. Darr, and Mr. Whitla.

The Chairman. Were they practical steel men?

Mr. Kennedy. Some of them were very able, practical steel men.

The Chairman. If the Union-Sharon Steel Co. had been inclined to enter the field as active competitors of the Steel Corporation, could they have maintained themselves better than the average owner of plants in the country?

Mr. Kennedy. Yes; very much better, owing to their very strong financial standing. Mr. Frick and Mr. Mellon and Mr. Flinn and some of the others had very strong financial standing.

Mr. Reed. You do not mean the Sharon Steel Co. was in good financial condition in the fall of 1902?

Mr. Kennedy. No; but the people back of the Union Steel Co. were very strong, and they had been merged about this time.

The Chairman. They had been merged about one month before?

Mr. Kennedy. Yes.

Mr. Bartlett. Do you mean to say this contract of purchase, marked here "Schedule A," contract for the purchase of material and supplies and things of that sort, signed by Flinn, Stevenson, Darr, Mellon, and Donner, being a contract of sale, would naturally increase the price of the ores?

Mr. Kennedy. Yes; and I think Mr. A. W. Mellon and Mr. Frick would not sell a works which they were just ready to run unless they got a real, substantial profit on it, and at the same time agreed not to follow that line of business for that length of time.

The CHAIRMAN. What amount of this capitalization would you say was due or could be credited to the value of the works, and what to the consideration that they kept out of the steel business for 10 years?

Mr. REED. I object to that, Mr. Chairman, because Mr. Kennedy——

The CHAIRMAN (interposing). I think probably it is objectionable.

What it would have cost to reproduce those two plants?

Mr. KENNEDY. I understood it would have cost just what they paid for them outside of the ore; that the only place a profit was taken was on the ore.

The CHAIRMAN. Do you know anything, Mr. Kennedy, about the output of the Sharon works in pig iron at the time they were acquired—and the Union?

Mr. REED. They were bought two years apart, Mr. Chairman, one in 1902 and the other in 1904. Are you combining the two? Will you ask Mr. Kennedy to distinguish between actual capacity and prospective capacity, too?

The CHAIRMAN. What was the output, Mr. Kennedy? Do you know what was the output of those plants at that time?

Mr. KENNEDY. The Sharon or the Union?

The CHAIRMAN. Either or both of them.

The Union Steel Co., after merger with the Sharon Steel Co., in November, 1902, had a capacity of 180,000 tons of pig iron.

Mr. REED. Where are you reading from, Mr. Chairman?

The CHAIRMAN. Page 3643 of McRae's report.

At that time the Steel Corporation had a production of 7,802,812 tons of pig iron and 350,000 tons of steel ingots, as against 9,743,918 tons of the Steel Corporation.

With that capacity and that amount of ore this company was capitalized at $65,000,000. In 1907 they secured the Tennessee Coal & Iron Co., to use that for the purpose of making this estimate; but I believe the Tennessee Coal & Iron Co.'s capacity of pig iron was in excess of a million tons a year. I will get the exact figures later. It had over 700,000,000 tons of iron ore, as compared with the 16,000,000 or 18,000,000 tons of iron ore of this concern. It also had over a billion tons of coal.

Do you know something about those works of the Tennessee Coal & Iron Co. at the time they were acquired—its steel plants and the like? What was the value of the Tennessee Coal & Iron Co. as compared with the Sharon Co., without regard to the men behind it? Say they were both owned by the same individual.

Mr. REED. If the chairman will permit me to interrupt him, while it is true Mr. McRae says, on page 3643, that the capacity of the Union Steel Co. was 180 tons of pig iron, Mr. Herbert Knox Smith, on page 254 of his report, puts their pig-iron capacity at 750,000 tons; and while the chairman says the Tennessee Coal & Iron Co. had 700,000,000 tons of ore, the estimates already in evidence by Mr. Perrin and his associates show that it had something like 300,000,000 tons.

The CHAIRMAN. I will quote from the statement of Mr. Munsey in the record.

Mr. REED. I did not know that was in the record. There seems to be some little uncertainty about the correctness of these figures.

The CHAIRMAN. I have it in Munsey's Magazine.

Mr. REED. I did not know that that was in the record.

The CHAIRMAN. What would you say, Mr. Kennedy, taking these two as the basis—the Union-Sharon and the Tennessee Coal & Iron Co.—as to the value of one property compared with the other?

Mr. KENNEDY. I would consider the Tennessee very much more valuable than the other per se.

The CHAIRMAN. I will ask you to explain that to the committee. Tell us all you know about this company, about the cost of producing pig iron, the amount they could produce, the character of the two plants; and explain fully why you think one is worth more than the other, and if so, how much.

Mr. KENNEDY. I do not know exactly how much cheaper the Tennessee Coal & Iron Co. can produce iron than the northern furnace, but I would say, in round numbers, about $2 per ton. I should also say they could produce rails at least as cheaply as the northern company. This being the case, they commanded a very much larger territory, due to location, and had great potentialities that, I think, developed into a much larger thing than the Union-Sharon Co.'s, other things being equal.

The CHAIRMAN. Did the Union-Sharon Co. supply any territory not supplied by other concerns immediately adjacent? Had they any territory peculiarly their own?

Mr. KENNEDY. None at all.

The CHAIRMAN. What was the case with the Tennessee Coal & Iron Co.?

Mr. KENNEDY. The Tennessee Coal & Iron Co. has probably always dominated a large territory.

The CHAIRMAN. What territory is that?

Mr. KENNEDY. All along the Gulf and all the territory that can be reached from Birmingham, Ala., with a material advantage in freight rates as compared with the northern steel plant.

Mr. DANFORTH. Where do these freight rates meet—how far north?

Mr. KENNEDY. I can not tell exactly where that would be.

The CHAIRMAN. Herbert Knox Smith's report, on page 269, gives the Tennessee Coal & Iron Co.'s production of pig iron at 1,000,000 tons. I thought I was right.

Had the Sharon any rail mills?

Mr. KENNEDY. No.

The CHAIRMAN. Had the Steel Corporation any rail mills?

Mr. KENNEDY. Yes.

The CHAIRMAN. I mean the Tennessee Coal & Iron Co.

Mr. KENNEDY. Yes.

The CHAIRMAN. Were they the builders of the first open-hearth rail mill in this country?

Mr. KENNEDY. As I remember it, they were the first to take a large contract for open-hearth rails in this country. Other people could have made them, but they came into prominence by taking the first large order, that being for the Harriman lines.

The CHAIRMAN. How do those ores, considering the cost of assembling them in the South, compare in value, considering the cost of assembling those ores, with the ores on the Mesabe Range, the Superior ores?

Mr. KENNEDY. That is very hard to say. They are immensely valuable, but just how much per ton is a matter hard to tell correctly.

The CHAIRMAN. If a ton of iron ore can be made from three tons of these Clinton ores at a less cost than a ton of pig iron can be made from 2 tons of Superior ore, what would be the value of the 3 tons of Clinton ore as compared with the 2 tons of Superior ore?

Mr. KENNEDY. That would be difficult to say, from the fact that the 3 tons of ore require somewhat more coke to smelt. I know, in a general way, it is less than it used to be, because they are learning to work that better. It is hard to fix a mathematical comparison.

The CHAIRMAN. I am assuming the cost of making a ton of pig iron at Birmingham and the coke and the assembling of it, the assembling of the limestone and the assembling of sufficient coke and limestone to make a ton of pig iron at Pittsburgh. You can assemble the raw materials sufficient to smelt a ton of pig iron at both places at the same price. Leaving that out of consideration, the question is, If it takes 3 tons of Clinton ore to make a ton of pig iron and takes 2 tons of Superior ore to make a ton of pig iron, and you can assemble the 3 tons cheaper than you can assemble the 2 tons, how will they compare in value?

Mr. KENNEDY. Under those assumptions I should think the 3 tons would approximate in value the 2 tons. Of course, pig iron, when you get it, would not be quite so good in the South. There is a lot more phosphorus to take care of in the future processes.

The CHAIRMAN. I believe you have stated it is a fact they can assemble all the raw material—the coke and ore and limestone—and make a ton of pig iron at Birmingham for less than they can make a ton of pig iron at Pittsburgh.

Mr. KENNEDY. Yes.

The CHAIRMAN. Are you acquainted with the extent of the ore holdings and coal holdings of the Tennessee Coal & Iron Co.?

Mr. KENNEDY. I have known them, but I have not them in mind at the present time. I know they are very large.

Mr. YOUNG. Do you mean you never examined this district yourself?

Mr. KENNEDY. Yes; I have been along the ore; and I have been also in several coal mines, but, of course, that gives very little idea of the acreage. A great deal of it is undeveloped yet.

The CHAIRMAN. Assuming that ores in the Birmingham district are controlled practically entirely by the Woodward Iron Works and the Sloss-Sheffield people and the Republic Iron & Steel Co., outside of the Tennessee Coal & Iron Co., and the Tennessee Coal & Iron Co. had a greater amount of these raw materials, and was acquired, and that that eliminated those fields from the possibility of furnishing merchantable ores in great quantities to the market and placing their ore holdings at 700,000,000 tons and their coal at a billion tons and taking what you know of their plants at the time they were absorbed, what would you say was the value of that property?

Mr. REED. Does not that question contain quite a lot of rather violent assumptions?

The CHAIRMAN. No; the record is filled with the figures as given. Of course, if my assumptions are not correct his answer will be of no consequence.

Mr. YOUNG. I think there are none of the papers that have the opinions of engineers as to the amount of that ore, except our own. Another suggestion I would like to make is that there is nothing stated about whether the 700,000 tons of ore is merchantable or unmerchantable. It is well known to everybody there is a large amount of ore in Birmingham that is at present unmerchantable.

The CHAIRMAN. I understand that, but I am framing my question. Taking these as the proper holdings, what would you say was the value of that property?

Mr. YOUNG. Now, or when it was acquired?

The CHAIRMAN. I will read from Mr. Munsey's article. Mr. Munsey states these figures were compiled under the auspices of the Steel Corporation, and says:

> The Tennessee Coal & Iron Co. is entered as a separate item in this inventory. Its ore and coal and mills and furnaces and other property are not included in the other classifications. This company is put in at an estimated value of fifty millions of dollars, which is somewhat more than the Steel Corporation paid for it, but probably a much smaller sum than it is worth to the Steel Corporation. Its chief value lies in its coal and ore properties. Its ore is estimated at 700,000,000 tons. It is not as high grade as the northern ores, but assuming that it is worth 15 cents per ton, it alone would amount to $105,000,000. Its coal is estimated at about a billion tons, which, at 10 cents a ton, would be $100,000,000.

Mr. REED. Does he offer that for it?

The CHAIRMAN. No; but he states those figures were furnished by the Steel Corporation and this report made under their auspices.

Mr. BARTLETT. It is fair to say, Mr. Chairman, that this article in Munsey's magazine was shown to Judge Gary when he was before the Ways and Means Committee, and it follows his testimony of 1909, and, as I recall it, it states that they would not have had the article written, but for the courtesy and assistance of the Steel Corporation. They virtually state that the figures given are the Steel Corporation figures. When Judge Gary was on the stand, if I recollect—I am not stating anything positively—I called his attention to this article, and he virtually admitted that, so far as that article was concerned, Mr. Munsey was assisted by the Steel Corporation in fixing the value.

The CHAIRMAN. Did he not say before the Ways and Means Committee the article was practically correct?

Mr. YOUNG. That article states some facts, and then it contains some estimates of Mr. Munsey of what those things are worth. He says the Steel Corporation values this property at $50,000,000, and he goes on to estimate it at a very much greater value.

The CHAIRMAN. I want to get the witness to answer on this statement of Mr. Munsey. I think too much of Mr. Kennedy's judgment on this matter to base a hypothetical question upon anything else than facts that can be well established.

Mr. KENNEDY. I should say it was worth $100,000,000 at the least.

Mr. BARTLETT. For what?

Mr. KENNEDY. The plant based on 700,000,000 tons of ore and 1,000,000,000 tons of coal.

The CHAIRMAN. Assuming there were 400,000,000 available ore instead of 700,000,000, what would you then say? I mean, assume

300,000,000 of the 700,000,000 tons of ore are not now available on account of being low grade, and leaving the other figures as they are, a billion tons of coal, and the plant standing with its railroad properties and potentialities, what difference would you make in your estimate on that account?

Mr. KENNEDY. I would not change the estimate much one way or the other on that.

The CHAIRMAN. I have here the report made by Mr. Perrin. Do you know Mr. Perrin?

Mr. KENNEDY. Yes, sir.

The CHAIRMAN. And Mr. Aldrich, the engineer?

Mr. KENNEDY. No.

The CHAIRMAN. Mr. Aldrich represented one of these companies, Mr. Moore another, and Mr. Perrin another.

Mr. REED. That was made long before the Steel Corporation took the Tennessee Coal & Iron Co.

The CHAIRMAN. The three companies, as I recall, the Sloss-Sheffield, the Republic Iron & Steel, and the Tennessee Coal & Iron, had this report made, and these men made the appraisement.

Mr. BEALL. What was their estimate of the value?

The CHAIRMAN. Of the value of the ores in that district, and this is the value of the ores of the Tennessee Coal & Iron Co.

Mr. YOUNG. That is in the record, is it not?

The CHAIRMAN. Yes; this is in the record, but I wish to get an estimate of the number of tons of ore. This shows the Tennessee Coal & Iron Co., red ore, tonnage of 402,621,500 tons. In an explanatory note you will find some of these matters explained.

I will put a summary of the tables in the record at this point as to their ore.

Tennessee Coal, Iron & Railroad Co. has 402,621,500 tons of red ore; of the lower grade ore, red ore included fourth class, 308,509,100 tons. Then they have of brown ore, 398,686,100 tons.

Mr. REED. No, Mr. Chairman; that is red and brown ores together, including leased properties.

The CHAIRMAN. All ore, red and brown, 412,798,500 tons, or 76.5 per cent of the ore in that district as held by the three companies. It has been testified there is about 5 per cent of ore in that district not held by these three companies.

Mr. REED. Where is that?

The CHAIRMAN. In Perrin's testimony.

Mr. REED. I do not remember it.

Mr. BEALL. Let me read what Herbert Knox Smith says, Mr. Chairman.

The CHAIRMAN. Very well.

Mr. BEALL (reading):

> These ore and coal properties were very extensive. The 1904 report of the Tennessee Coal, Iron & Railroad Co. placed the total ore tonnage at over 400,000.000 tons and the total tonnage of coal at over 1,600,000 tons. The 1906 report of the company, however, stated that the ore reserves were, as computed by competent authorities, estimated to be 700,000,000 tons, and the coal at 2,000,000,000 tons.
>
> More careful estimates were made subsequently by agents of the Steel Corporation. The estimates of these agents grouped these resources in three classes, namely, "Proven," "Probable," and "Possible." Their estimates of the coal property of the company follows:

"Coking coal, proven, 217,000,000 tons; probable, 90,000,000 tons; possible, 150,500,000 tons; total, 457,500,000 tons.

"Steam and domestic coal, proven, 68,000,000 tons; probable, 351,800,000; possible, 520,000,000; total, 939,800,000.

"Total, proven, 285,000,000; probable, 441,800,000; possible, 670,500,000; total, 1,397,300,000."

The iron-ore deposits of the company were estimated by the same agents as follows:

"Red ores, reasonably assured (including tonnage already developed), 175,600,000; additional probable tonnage, 279,600,000; total, 455,200,000.

"Brown ores, reasonably assured (including tonnage already developed), ———; additional probable tonnage, 3,150,000; total, 3,150,000.

"Red ore of lower grade, but which may be of future value, reasonably assured (including tonnage already developed), 204,000,000; additional probable tonnage, 35,000 000; total, 239,000,000.

"Total, reasonably assured (including tonnage already developed), 379,600,000; additional probable tonnage, 317,750,000; total, 697,350,000."

Mr. REED. But, Mr. Beall, you will notice that that 379,000,000 includes 4,000,000 of what Mr. Smith calls red ore of the lower grade, but which may be of future value, and includes only 175,000,000 tons of red ores reasonably assured at present marketable standards.

The CHAIRMAN. Taking the statement of Herbert Knox Smith, Mr. Kennedy, would you change that estimate materially?

Mr. KENNEDY. I should probably reduce it a little, say, to $90,000,000, on that supposition.

The CHAIRMAN. What supposition is that?

Mr. KENNEDY. That there are 400,000,000 tons of ore, 1,000,000,000 tons of coal, which I take to be about the gist of the last assumption of Herbert Knox Smith's statement. Whether there are 400,000,000 tons of it or 700,000,000 matters very little for the purposes of valuation, provided they get substantially all in the district, so that no competitor of any size comes in and starts any opposition.

Mr. REED. That is part of your assumption in the valuation?

Mr. KENNEDY. Yes; that they get a large part of the coal down there and of the ore.

Mr. REED. A monopoly?

Mr. KENNEDY. A practical monopoly; yes.

The CHAIRMAN. Do you know anything about the Troy Steel Products Co.?

Mr. KENNEDY. Very little; I have seen their works.

The CHAIRMAN. Do you know whether that company was operated at the time it was absorbed by the United States Steel Corporation?

Mr. KENNEDY. No; it was not.

The CHAIRMAN. Could it have been operated at a profit?

Mr. KENNEDY. No; not under any ordinary conditions.

The CHAIRMAN. Why?

Mr. KENNEDY. It was badly located. Freights were against them.

The CHAIRMAN. Do you know whether it has been operated since it was absorbed by the United States Steel Corporation?

Mr. KENNEDY. No; it has not. Some of the machinery was shipped away. They got a little salvage out of it, I think.

The CHAIRMAN. Do you know who owned this property, who were the people back of it?

Mr. KENNEDY. They were known as the Standard Oil people, I understand—Rockefeller, Rodgers, and their associates.

The CHAIRMAN. As a practical steel man, can you tell me what benefit would accrue to the United States Steel Corporation in buying a property which has not been operated and which was not operated and which it did not operate after it acquired it, and which was located as you say?

Mr. KENNEDY. No; I can not.

The CHAIRMAN. Do you know what was the probable cost of construction and equipment of that plant?

Mr. KENNEDY. No; I haven't any idea.

The CHAIRMAN. Was that property worth $1,100,000 at the time that it was acquired?

Mr. KENNEDY. I should think not. I do not know what the real estate was worth. It was worth the real estate plus the salvage.

Mr. BARTLETT. What was the purpose of purchasing the plant if it was unsuccessful and only worth the real estate and salvage?

Mr. KENNEDY. Good fellowship, I imagine.

Mr. BARTLETT. What do you mean by that? I do not understand there is any good fellowship in business.

Mr. REED. It was not all dismantled.

Mr. BARTLETT. Partially dismantled?

Mr. KENNEDY. I do not know why they should buy it.

Mr. REED. The blast furnaces are still ready to be used there. The bloom mill was taken to South Chicago and is being operated there now.

The CHAIRMAN. Have you ever conducted a blast furnace in India or China?

Mr. KENNEDY. In India, but not in China.

The CHAIRMAN. In Russia?

Mr. KENNEDY. Yes.

The CHAIRMAN. What is the cost of producing pig iron, if you know, in India as compared to the cost in this country?

Mr. KENNEDY. It is a little early to state yet with exactness, but probably about the same as in the Birmingham district.

The CHAIRMAN. What is the labor cost of producing pig iron in India as compared with the labor cost of producing it in this country?

Mr. KENNEDY. At the present time about the same, possibly a little higher there, owing to importing some men and paying their traveling expenses.

Mr. BARTLETT. Higher in India, you mean?

Mr. KENNEDY. Yes.

The CHAIRMAN. It has been stated repeatedly you can employ men in India for 5 or 10 cents a day, and in China the same, and that there is danger of having this country invaded by Chinese pig iron.

Mr. KENNEDY. We get a little Chinese pig iron on the Pacific coast now.

Mr. REED. We are getting it now, are we not?

Mr. KENNEDY. We are, occasionally.

The CHAIRMAN. What is the total production of pig iron in China as compared with this country?

Mr. KENNEDY. Very small; I don't know how much.

The CHAIRMAN. One per cent?

Mr. KENNEDY. I should say not 1 per cent of the production in this country. It may grow in the future. I do not know much about China.

The CHAIRMAN. How about India?

Mr. KENNEDY. In India the growth will not be very big, as the collieries are limited there. It is not likely the industry will ever grow to very large proportions there.

The CHAIRMAN. Do they employ people at a less wage per day than we do?

Mr. KENNEDY. Yes.

The CHAIRMAN. Is the labor cost any greater in India than it is here?

Mr. KENNEDY. Labor costs for unskilled labor are perhaps slightly cheaper than here, but, as I explained, they have to take some of their skilled men over from this country and from Germany, and in that way the total labor cost runs slightly higher than here.

Mr. DANFORTH. How long have these India mills been running?

Mr. KENNEDY. Only a short time. They started one furnace, and the steel mills themselves are just about to start.

Mr. DANFORTH. It is purely experimental yet?

Mr. KENNEDY. To a certain extent; yes.

The CHAIRMAN. Have they been making pig iron in India for some time?

Mr. KENNEDY. There have been some small furnaces there.

The CHAIRMAN. Have you ever constructed a furnace in Russia? Mr. Kennedy, what is the cost of producing pig iron in Russia as compared with this country?

Mr. KENNEDY. I have never followed that up.

The CHAIRMAN. What is the labor cost in a ton of pig iron in this country?

Mr. KENNEDY. In the modern furnace what is known as producing labor, the labor at the furnace, runs from 40 to 60 cents a ton.

The CHAIRMAN. What is the cost of producing a ton of pig iron after your materials are assembled at the furnace, in a well-organized plant?

Mr. KENNEDY. From $1 to $2.

The CHAIRMAN. Per ton?

Mr. KENNEDY. Yes.

Mr. BARTLETT. In saying "labor cost" what do you compute as the labor cost?

Mr. KENNEDY. The labor cost is at the blast-furnace plant, after the coal, coke, ore, and limestone are laid down there.

Mr. BARTLETT. Have you ever inquired what the labor gets out of one unit of this production? Say the pig iron sells for $12 a ton, how much does the labor get out of that one unit? What is labor's share out of that, according to the wages they get?

Mr. KENNEDY. That is rather an abstract and involved proposition. If you take the labor, meaning the labor of mining the ore and labor in connection with transporting it and all that, it runs into a good deal. In my figures I speak only of labor at the plant after the materials are assembled.

Mr. BARTLETT. That, you think, is 60 cents a ton?

Mr. KENNEDY. From 40 to 60 cents a ton.

Mr. BARTLETT. What do you find to be the labor cost in India—about the same or more?

Mr. KENNEDY. The labor cost in India, when they get both furnaces running, will be about 78 cents a ton; but those are smaller furnaces, and furnaces of that same size in this country will run that high, I would say.

Mr. BARTLETT. Is labor any chaeper in China than it is in India, or is it about the same?

Mr. KENNEDY. I do not know; I have never been in China.

Mr. BARTLETT. Do you know anything about Japan?

Mr. KENNEDY. No; I have never been there.

Mr. BARTLETT. Do they have the same class of people for their laborers there?

Mr. KENNEDY. No; the Chinese labor is better than the India labor, and better also than the Japanese.

Mr. BARTLETT. You mean a better class?

Mr. KENNEDY. Yes; stronger men, and men who do their work better.

Mr. BARTLETT. Wages for laborers are not any higher in Japan and China than in India?

Mr. KENNEDY. I presume they are about the same. They are very low.

Mr. BARTLETT. If it costs as much to produce a ton of pig iron in India or China or Japan, there is not much danger of their competing here with the producers of pig iron successfully, is there, paying the freight?

Mr. KENNEDY. I should think the Chinese people might send the stuff to the Pacific coast. I see no reason why they should not. It costs $13 or $14 to take pig iron from Pittsburgh to the Pacific coast, or $12 from Chicago, which is more than the cost there to start with.

Mr. BARTLETT. That is the reason they might compete with the manufacturers of pig iron here—because of the distance over the railroads from here to the Pacific coast?

Mr. KENNEDY. Yes.

Mr. BARTLETT. And then ship transportation from China by water?

Mr. KENNEDY. Yes.

Mr. DANFORTH. What is that transportation, if you know, from China by water?

Mr. KENNEDY. I have forgotten, but I should judge $3 or $4.

Mr. BARTLETT. They have extensive pig-iron mills on the Pacific coast, have they?

Mr. KENNEDY. No; we have very little in the way of iron works on the Pacific coast.

Mr. BARTLETT. How far inland from the Pacific coast would the freight rates debar the Chinese pig-iron seller from competing with the American manufacturer?

Mr. KENNEDY. I am not quite clear whether the rate from Chicago to Salt Lake City is higher than to San Francisco, as it used to be. It would depend on that somewhat. If that old state of affairs prevails, you can come in as far as you please, as far as Denver, I should suppose.

Mr. BARTLETT. It is not a matter, then, of tariff that would prevent the Chinese from competing with our manufacturers of pig iron? It is a matter of freight rates and transportation? Is that it?

Mr. KENNEDY. Largely, I should say; yes.

Mr. YOUNG. As a matter of fact, they are now supplying all the pig iron used on the Pacific coast, are they not?

Mr. KENNEDY. I do not know that. I know some has been brought in, but whether they are supplying all or not, I do not know.

The CHAIRMAN. Are there any steel works on the Pacific coast of any importance?

Mr. KENNEDY. No.

Mr. STERLING. Mr. Kennedy, could you give us a statement showing what percentage of the cost of pig iron consists of raw material, what percentage is for transportation, what percentage is for manufacture, and what percentage is profit? Take the present price at Pittsburgh, and divide it into those four parts—can you?

The CHAIRMAN. I have foundry iron at Pittsburgh. These are prices the American Iron & Steel Co. institute. This is Bessemer pig iron at Pittsburgh, $15.71 at Pittsburgh.

Mr. KENNEDY. So far as profit goes, it has been a negligible quantity for some time back. The price is getting a little better now. The profit has been a negative quantity, I might say.

Mr. STERLING. I would like to have the figures to see how it would come out compared with the price.

What is the present price, according to that table, Mr. Chairman?

The CHAIRMAN. The present price of Bessemer pig iron is $15.71 for 1911, and of basic pig iron at Pittsburgh is $15.98.

Mr. STERLING. Let us take that price of Bessemer pig iron. How much is for raw material, how much for transportation, how much for manufacture, and how much is profit to the transportation company, and how much profit to the manufacturer? Could you divide that up?

Mr. KENNEDY. No; I could not tell that, because I do not know the figures. It would mean a good deal of digging into statistics, I should judge, to get that.

Mr. STERLING. Do you know what the ore is worth?

Mr. YOUNG. Where?

Mr. STERLING. Wherever it comes from.

Mr. YOUNG. At the mines, you mean?

Mr. STERLING. Yes.

Mr. YOUNG. Of course none of it is sold there, as a matter of fact.

Mr. REED. Mr. Herbert Knox Smith made a very elaborate effort to separate those costs, and gave the figures about as follows:

> Ore, $4.40; coke, $3.30; limestone, $0.41; labor, $0.55; other operating costs, $0.50; a total of $9.71.

Mr. STERLING. That would exclude the profit to the mine owner and the coal man and the transportation company and the manufacturer. Those four profits would be added to this price, then?

Mr. KENNEDY. To fix a concrete case, it excludes the profit on labor of the mining company, the profit on transportation to the Duluth & Iron Range Railroad, the Pittsburgh Steamship Co., the Bessemer Railroad, the Union Railroad, the Frick Coke Co., and the limestone company, and also the manufacturer.

The CHAIRMAN. It gives the company's cost, company or book cost, as $13.89, a difference of $4.11.

We will suspend at this time until half-past 2, at which time, Mr. Kennedy, we will be glad to have you appear for further examination.

Thereupon, at 1 o'clock p. m., the committee took a recess until 2.30 o'clock p. m.

AFTER RECESS.

The committee reassembled at 2.30 o'clock p. m., pursuant to taking a recess, Hon. Augustus O. Stanley (chairman) presiding.

STATEMENT OF JULIAN KENNEDY—Continued.

The CHAIRMAN. Mr. Kennedy, you were, you state, connected with the Carnegie Steel Co. for some years. Are you acquainted with or do you know anything about the difference in the estimates placed by Mr. Frick, or Mr. Carnegie, or Mr. Schwab, or Mr. Phipps, and others on the value of those properties at the time of the suit over the enforcement of what is known as the iron-clad contract—at least, the elimination of Mr. Frick from the Carnegie company by the terms of the contract?

Mr. KENNEDY. Only what I have seen and read in the papers in regard to it.

Mr. YOUNG. You mean the newspapers?

Mr. KENNEDY. Yes; and other papers.

The CHAIRMAN. In that investigation Mr. Schwab, Mr. Frick, Mr. Carnegie, and others claim in the petition that about $76,000,000, I believe, was the book value of those properties. Mr. Schwab and Mr. Carnegie have since modified their statements to some extent. Have you any idea as to whether that estimate was correct or not, and what was the probable value of the Carnegie company at the time it was absorbed by the Steel Corporation, at the time of that litigation?

Mr. YOUNG. You mean the real or the book value?

The CHAIRMAN. The real value.

Mr. REED. Mr. Chairman, it was represented to be the book value, the tangible assets of the Carnegie Steel Co. (Ltd.). The Carnegie Co. at the time the Steel Corporation got it included the Frick Coke Co. and a lot of other properties that the Carnegie Steel Co. never owned, and it could not by any possibility be included among its assets in 1889.

The CHAIRMAN. This company that was absorbed was known as the Carnegie Co., was it not?

Mr. REED. The Carnegie Steel Co. (Ltd.).

The CHAIRMAN. The Carnegie Steel Co. (Ltd.)?

Mr. REED. Yes.

The CHAIRMAN. What was the value of the company? How did its book value compare with its actual value? You are acquainted with the property, are you not?

Mr. KENNEDY. I should say from my knowledge of the methods of keeping accounts there, the real value would be somewhat higher than the book value, as everything was done very conservatively, and very often old machinery discarded and new put in, without writing any more of new capital, where the plant was somewhat improved, so that in a general way the real value would be higher; just how much, I could not say.

The CHAIRMAN. Well, approximately.

Mr. REED. I object to a mere guess.

The CHAIRMAN. I say as near as you can approximate it; if you have an idea. I do not mean down to the cent. You were well acquainted with the plants, were you not?

Mr. KENNEDY. With most of them; yes.

The CHAIRMAN. And you have valued plants of that kind?

Mr. REED. As to ore properties?

Mr. KENNEDY. I could not value the ore properties. I speak only form my knowledge of keeping the accounts, which was always conservative when I was with them, and apt to show what might be called a minimum value.

The CHAIRMAN. How much do you think the cost of reproduction exceeded this value by virtue of their failure to write in the difference between discarded plants and installed plants?

Mr. KENNEDY. I think the cost of reproduction at that time would have somewhat exceeded the book value, but just how much I can not say.

The CHAIRMAN. Would it exceed it by twenty-five million?

Mr. KENNEDY. I should think possibly it might.

The CHAIRMAN. Would you say more than that? Would that be fair?

Mr. KENNEDY. To make a guess, I would about split the difference between the litigants in that; I don't remember what their respective amounts were.

The CHAIRMAN. That would give you about how much, one hundred and fifty million?

Mr. KENNEDY. I don't remember the respective amounts.

The CHAIRMAN. Seventy-six million and two hundred and fifty million, I believe.

Mr. KENNEDY. Yes; that would be about one hundred and sixty million.

The CHAIRMAN. Have you any idea of what would be the cost to reproduce—from what you know of the National Tube Co. and of the Carnegie Co.—the properties of the Steel Corporation at the time it was organized?

Mr. KENNEDY. No; I have not. There are so many properties I never saw, including the ore and coal, and all that sort of thing.

The CHAIRMAN. Mr. Kennedy, there has been considerable discussion here of the economy of integrating a steel plant, the saving incident to the passing of the hot metal from the blast furnaces to the open-hearth furnaces, or the Bessemer converters, and of using the hot ingot—I am not well up as to the process.

Mr. REED. Ingots is right.

The CHAIRMAN. And producing a finished product without allowing your metal to cool, without the incident expense of reheating or transporting the semifinished product.

I will ask you to give the committee your opinion of the extent to which that property should be integrated, if it does add to the economy, and to what extent, and how?

Mr. KENNEDY. It is very desirable to have a plant which will take the ore, coke, and limestone, transform it into rails, billets, or sheet bars, in the same plant. There is a considerable saving in keeping the metal hot all the time, and especially between the blast furnace and the converter or open-hearth plant, as the case may be. There is a saving in using liquid metal of $1 to $1.25, as compared with casting the metal and remelting it.

The CHAIRMAN. You mean a dollar to a dollar and a quarter a ton?

Mr. Kennedy. A dollar to a dollar and a quarter a ton, as compared to casting the metal and remelting it.

Also there would be a saving of any cost of transfer, in case the metal were moved, so that the blast furnace which casts this metal into pig and allows it to cool and ships this off to another plant, is at a disadvantage of not less than a dollar plus the cost of haulage.

There is also some collateral advantage in the way of utilizing power from the gases in case the blast furnace is connected with a steel plant. After the material reaches the form of sheet bar, or small billet, the advantage of having the remainder of the plant running in connection with it is not so great. There would, however, still be the saving of haulage on the material.

The Chairman. The sheet bars are not run hot from the mill in which they are rolled to the tin-plate factory, and the like of that.

Mr. Kennedy. No. Sheet bars are allowed to cool, in any event, so that the only saving at this point would be the cost of transfer.

The Chairman. Was this Carnegie Co. perfectly integrated or approximately so?

Mr. Kennedy. Very largely so. They had some furnaces, such as the Lucy furnaces in Pittsburgh, which were detached; but the majority of their plants were arranged for taking the material through without losing the heat and without unnecessary haulage.

The Chairman. Was the Federal Steel Co. an integrated company?

Mr. Kennedy. To a large extent; yes.

The Chairman. Where you have two or more perfectly integrated plants, is there any economy from the point of cheapness of production—leaving out this question of competition entirely or of fixing prices; just simply from the point of cheapness of production—is there any economy in combining two or more distant and integrated plants in the one concern?

Mr. Reed. By integrated plants you mean the steel works combined—the blast furnace and steel works?

The Chairman. Yes.

Mr. Reed. Which will produce billets or sheet bars from the ore and limestone and coke?

The Chairman. I mean a company having its ore supply and its various apparatus for the making of semifinished products adjacent from the blast furnace to the billet.

Mr. Reed. I simply wanted to get your conception of the term "integration."

The Chairman. That is what I mean.

Mr. Kennedy. There would be no advantage as far as the actual production of the work is concerned. But if you take into account the delivery to the market, and assume that to be part of the cost, there would be a saving, as, for example, complete works at Chicago and complete works at Pittsburgh, if run in unison, could distribute their material to the consumer to better advantage than if each were working independently, and the Pittsburgh plant shipping some of its material to the vicinity of Chicago and the Chicago plant shipping the other way. As far as the actual production at the works is concerned there would be no advantage in working them together.

The Chairman. You were acquainted with the capitalization of the Steel Corporation, and you know about what that is?

Mr. Kennedy. Yes.

The CHAIRMAN. And something of the cost incident to the operation of the holding company. Would any saving in this matter of transportation compensate the added cost of interest on bonds and the expense of the holding company, whose business it is to exercise a general supervision over the various subsidiary concerns, as a manufacturing proposition and not as a price-making proposition?

Mr. KENNEDY. I do not exactly understand the connection between the holding company and the bonds.

Mr. REED. Do you understand the rest of the question? If you do, you have the advantage of me.

Mr. KENNEDY. I think so.

The CHAIRMAN. I will try and make myself plain. The Carnegie Co., I believe, had no bond issue at the time it was organized and at the time it was absorbed into the United States Steel Corporation, had it?

Mr. REED. $160,000,000.

Mr. KENNEDY. $160,000,000 of bonds and $160,000,000 of stock, as I remember it.

The CHAIRMAN. That was immediately before its absorption.

Mr. REED. It was in March, 1900.

The CHAIRMAN. Now, then, what is the issue of its bonds?

Mr. REED. The same.

The CHAIRMAN. I was under the impression that Mr. Carnegie received more than $160,000,000 in bonds.

Mr. REED. He did. He turned in his bonds and his stocks and he got bonds for the whole thing.

The CHAIRMAN. What was the amount of his bonds?

Mr. YOUNG. About $213,000,000, he swore.

The CHAIRMAN. What is the bonded indebtedness of the Steel Corporation now or at the time of its organization?

Mr. REED. $304,000,000.

The CHAIRMAN. This corporation has a bonded indebtedness of $304,000,000?

Mr. REED. It has more than that now. It has issued second-mortgage bonds since then.

The CHAIRMAN. And then there was a bond conversion.

Mr. REED. That is for the bond conversion, that it issued the second-mortgage bonds.

The CHAIRMAN. My impression was there was about $320,000,000 bonds, but I have not the tables here before me.

Mr. REED. It is more than that.

The CHAIRMAN. At the time it was absorbed, including the bonds of the subsidiary companies.

Mr. YOUNG. I guess it was more than that.

The CHAIRMAN. I can keep everything in my head except these bonds.

Mr. REED. I will tell you where you get your 320,000,000. The total capitalization of the Carnegie Steel Co. was $160,000,000 of stock and $160,000,000 of bonds. The two together make the $320,000,000 that you have in your head.

The CHAIRMAN. Yes; that is right. Here it is. Total bond issue, $422,000,000.

Mr. REED. Of the Steel Corporation at the present time?

The CHAIRMAN. Yes.

Mr. Young. Is that Herbert Knox Smith's report?

The Chairman. No; Mr. MacRae's report, Exhibit No. 27. It is in MacRae's report, and I thought I could lay my hands on the exact capitalization.

Mr. Reed. The exact capitalization of the Steel Corporation, Mr. Chairman?

The Chairman. Yes. I think it is the first exhibit.

Mr. Reed. I can give you that.

Mr. Young. Here is the situation in 1901, Mr. Chairman. This is from Herbert Knox Smith's report. The Steel Corporation bonds were $303,450,000; underlying bonds, $59,091,657. That would make about $362,000,000, in round figures, at that time, of Steel Corporation and subsidiary bonds.

Mr. Danforth. You will find the whole thing in Exhibit 20, following page 3717. All these exhibits follow that page. It is Exhibit 20.

The Chairman. Yes; here it is.

Mr. Danforth. That is for 1910.

Mr. Young. That will be a good deal more than this in 1910.

The Chairman. A total of $596,000,000. That is the total, I believe; is not that correct?

Mr. Reed. The total bonds outstanding on December 31, 1910?

The Chairman. Yes; $596,351,866.70.

Mr. Reed. That includes the subsidiary companies' bonds.

The Chairman. Now, I want to approach this approximately. It is in one of these reports, but I do not lay my hand on it—the cost of the operation of the United States Steel Corporation.

Mr. Reed. Its general expenses were about $1,000,000 a year.

The Chairman. Taking this bonded indebtedness, and its general expenses of operating incident to the fact they are all operated under a holding company, would you say that the saving in the transportation was sufficient to compensate for this expense?

Mr. Reed. You mean the $596,000,000?

The Chairman. I do not conceive they would have issued these bonds unless it would have been necessary to go into one concern and absorb the Carnegie Co.

Mr. Danforth. This covers all the subsidiary companies' bonds guaranteed by the United States Steel Corporation, and also all that were not guaranteed, debenture and scrip.

The Chairman. He took simply the bonds issued, say, $300,000,000 and odd, for the purpose of satisfying Mr. Carnegie.

Mr. Reed. The chairman will pardon me if I just try to get this question straightened out.

The Chairman. Certainly.

Mr. Reed. You are asking Mr. Kennedy if in his opinion the economy in freight alone caused by owning plants in the different districts——

The Chairman. Yes.

Mr. Reed (continuing). Will pay all of this bond issue.

The Chairman. No; I am asking this: As a manufacturing proposition, assuming that there was no advantage in railroad transportation other than being nearer the consumer, if the expense which was incident to the creation of this holding company, and to the peculiar form of the capitalization of this company, is justified by that saving which you mention, simply as a manufacturing proposition.

Mr. KENNEDY. I do not suppose that that saving would pay the interest on $300,000,000 of bonds, if I may express it that way.

The CHAIRMAN. Now, Mr. Kennedy, there has been a great deal of discussion lately, not only before this committee, but by the Interstate Commerce Commission in its decisions and in its last report, as to the propriety of having industrials control and operate common carriers. Is a railroad an essential or a necessary part—I mean a railroad acting as a common carrier—is such a railroad an essential part of an integrated steel mill?

Mr. KENNEDY. No; I should say not.

The CHAIRMAN. Can a railroad be operated more cheaply by an industrial concern, a manufacturing concern, than by persons engaged entirely in transportation? Is there any reason why it should be that you know of?

Mr. KENNEDY. I think not.

The CHAIRMAN. In the last report of the Interstate Commerce Commission I find the following expression:

> The evils most difficult to detect and to prove to-day are those arising out of the community of interest of certain carriers and industrial corporations. The ownership of industrial corporations by carriers and of carrier corporations by industrials is frequently taken advantage of to defeat that equality between shippers which the act contemplates. This is accomplished by unreasonable division of joint rates forced upon the carrier by powerful shippers who control industrial railroads. Such arrangements may be legal in form, although certainly illegal in effect. We find that a certain number of large industrial concerns control tracks and terminal facilities nominally owned by small railroad corporations which do not rise to the dignity of common carriers, but which are treated as such by the connecting carriers. As a result the connecting carriers make a switching allowance or a division of the joint rates to such terminal lines, which practice unquestionably results in discrimination and places the industrial at an advantage in the market. Another form of discrimination is found in the leasing of property by carriers to shippers for a nominal consideration with a further agreement that all shipments made by the lessee shall be routed over the lines of the lessor, etc.

If one industrial controls railroads and its rivals or its competitors do not, does it give to that industrial any advantage?

Mr. KENNEDY. Yes; I should say it did.

The CHAIRMAN. Do you concur in this statement of the Interstate Commerce Commission which I have just read to you?

Mr. KENNEDY. Yes; I think that is a correct view of this matter.

The CHAIRMAN. I will ask you to explain to the committee why any industrial concern should not own or operate a common carrier, if you take such view of it—just exactly wherein that advantage comes and how it can be used.

Mr. KENNEDY. In my opinion, a common carrier should treat everybody alike as nearly as possible, just as a post office; and for an industrial to own a common carrier of course may result in putting it at quite a considerable advantage, as compared with other people in the same line of business who do not. It is also susceptible of being used to get more than what might be called a due proportion of freight rates.

The CHAIRMAN. Ore is shipped from the Mesabi Range and the Vermillion Range in the Superior district to the blast furnaces in the valleys and in Pittsburgh, the furnaces of the Steel Corporation, and the Steel Corporation's competitors.

Do you know whether the Steel Corporation receives any advantage by virtue of the fact it owns the Duluth, Missabe & Northern, the Duluth & Iron Range, and the Bessemer & Lake Erie, serving its blast furnaces?

Mr. KENNEDY. Yes. It is manifest, assuming that freight rates are higher than they should be, the Steel Corporation owning the road, would receive a very considerable advantage. For example, if the steel company should haul out its own ore and an equal amount for outside people, and the rate should be, for illustration, 40 cents higher than it should be, the steel company which owned the road would be receiving 40 cents extra profit on each ton of its own ore and 40 cents profit on each ton of the outsider's ore, which would, in round numbers, enable them to produce pig iron at about $1.60 a ton cheaper than their competitors.

Of course, if the proportions were different, or the amount of excess freight were different, these figures would be correspondingly changed. These are predicated on the assumption that 2 tons of ore make a ton of pig iron.

The CHAIRMAN. That is, if they charge 40 cents a ton too much from the Range to Lake Superior?

Mr. KENNEDY. Yes.

The CHAIRMAN. Well, the rate until recently was 80 cents. Have you any idea what that service is worth?

Mr. REED. Are you asking this witness to give an estimate as to what is a reasonable rate over these roads?

The CHAIRMAN. Yes.

Mr. REED. Ought you not to show first that he knows what their earnings are; what their cost is?

The CHAIRMAN. Do you know something of those roads and what would be a reasonable cost for that transportation, Mr. Kennedy?

Mr. KENNEDY. I noticed in reading the reports that one of the roads does its business for 30 per cent of its gross receipts and another for 36 per cent. Based on this, I should say that 40 cents would be a reasonable rate.

The CHAIRMAN. And if they charged 80 cents, it would give them an advantage of $1.60 over their competitors on pig iron on that haul alone?

Mr. KENNEDY. Assuming that they used half of the ore and the outsider used an equal amount.

The CHAIRMAN. Now, then, take the Bessemer & Lake Erie Railroad. Have you any idea what would be a fair rate for that road, from either an examination of the earnings, or your knowledge of the road, your knowledge as to the cost of transportation?

Mr. REED. Then, to be consistent, I should like to object to that too, because Mr. Kennedy has not been shown to be an expert.

The CHAIRMAN. But I assume Mr. Kennedy is known as having a great reputation as an engineer, and in all branches of the industry, such as to qualify him without going through a voir dire.

Mr. REED. All right, if being a great engineer authorizes him to pass on freight rates.

Mr. BARTLETT. I do not think it does. I have no doubt Mr. Kennedy will not state, if he does not know anything about it.

The CHAIRMAN. Mr. Kennedy, do you know anything of the Bessemer & Lake Erie road, of its earnings, the character of the road, the cost of operating it?

Mr. KENNEDY. Oh, not in detail. In a general way, I do.

Mr. BARTLETT. Have you been in the habit of investigating about what would be reasonable rates, by taking information as to what the railroad earns, in determining what would be a reasonable rate for hauling freight? Do you sometimes arrive at it in that way?

Mr. KENNEDY. Oh, yes; I have.

Mr. BARTLETT. You have had experience in making those sorts of inquiries?

Mr. KENNEDY. Somewhat. I have had quite a little experience in arranging for freight rates in India, in connection with works there. Before the people built the works they made quite a study of the freight situation and also arranged for freight rates with the railroads, and it was my painful duty to assist them; so I gathered up a little information there.

Mr. BARTLETT. In that inquiry did you also investigate and make a comparison of rates here and in India?

Mr. KENNEDY. Yes. I might say that the rates in India for bringing the iron from the mines, the rates for bringing the coal from the mine, and the limestone from the quarries, and the finished product to the seaboard are all the same; and they are 3 mills per ton per mile.

Mr. BARTLETT. What is the rate here? How much per ton per mile?

Mr. KENNEDY. It varies a little, but considerably more than that.

The CHAIRMAN. The rate, I think, is about 96 cents over the Bessemer & Lake Erie.

Mr. REED. That is correct.

Mr. KENNEDY. It is for 135 miles, is it not?

Mr. REED. About 140. That includes an allowance that is made to the dock company.

Mr. KENNEDY. Eight cents for the docks company, which makes $1.04.

Mr. REED. Two cents for the dock company, and also an allowance is made to the Union Railroad.

The CHAIRMAN. That is all one line of road, practically.

Mr. BARTLETT. So your business has brought you into the duty of inquiring into the reasonableness of rates as to this particular kind of business as well as other things?

Mr. KENNEDY. Somewhat; not extensively. I do not profess to be very expert on it.

The CHAIRMAN. Mr. Oliver and others have testified to that rate. Mr. Oliver said it could be hauled for about 26 cents, was it not?

Mr. REED. Something like that. He counted in nothing at all for operating the dock and the Union Railroad.

The CHAIRMAN. I forget what Mr. Freer testified to.

Mr. DANFORTH. He based his figures on local enthusiasm. Mr. Kennedy, who owns and operates the railroads in India?

Mr. KENNEDY. They are owned by corporations and they are worked in connection with the Government also. The Government, perhaps, owns half of them.

Mr. **Danforth**. The Government dictates the prices which they may charge, I presume.

Mr. **Kennedy**. The Government watches it pretty carefully. They do not allow any private roads prorating with works roads or anything of that kind.

Mr. **Danforth**. In other words, if they are worked in cooperation with the Government, the Government is in position to dictate what prices may be charged, I presume.

Mr. **Kennedy**. No; I do not think so. I do not think the Government dictates. The Government acts—well, just about as our Interstate Commerce Commission watches matters here.

Mr. **Danforth**. Does not the Government own roads in India?

Mr. **Kennedy**. I think not, altogether. They advance money to aid in developing the country, and they take a certain amount of bonds; then, if the road is profitable, the other people get a little higher rate. They expect to get about 6 per cent and, I think, the Government about 4½ or something of that kind. But they pay very close attention to it. They have a railroad commission and all that sort of thing.

Mr. **Bartlett**. What I wanted to get at was this: Whether from your investigation at Superior and in examining this kind of business, these manufactories, and providing for this installation and the carrying on of the business you were in a position to state what would be a reasonable rate on ore?

Mr. **Kennedy**. Well, I don't know that my opinion would carry much weight.

Mr. **Bartlett**. Not as to the effect of your opinion. I want to know whether you have had enough experience, have investigated enough, to be able to say what in your opinion would be a reasonable rate for doing this kind of business?

Mr. **Young**. That is not quite it.

Mr. **Reed**. May I suggest that I know Mr. Kennedy as one of the fairest of men. Won't you ask him directly whether he himself feels he is competent with his present knowledge to pass upon the reasonableness of these rates?

Mr. **Bartlett**. That is what I was trying to do. He knows what his experience has been. He says he has already investigated the making of rates on this particular kind of business, and one way of determining it is what the expenses of the business are.

Mr. **Reed**. Certainly.

Mr. **Bartlett**. That is a fair way of doing it—to see what a railroad ought to charge as a reasonable charge for hauling ore.

Mr. **Reed**. I think Mr. Kennedy is more than anxious to oblige the committee, but perhaps he is giving you guesses where he does not feel the guesses are worth very much. I am willing to leave it to him.

Mr. **Bartlett**. Mr. Kennedy, do you or do you not think——

Mr. **Kennedy** (interposing). I hardly know about that. I have been vice president of a road for six or eight years that carries considerable freight, and I have studied it there.

Mr. **Bartlett**. You have the data, the details, that make up the basis from which you conclude what is a reasonable rate? You are familiar with those things?

Mr. KENNEDY. I know about what percentage of the gross it ought to earn not to be greedy.

The CHAIRMAN. This road managed to jog along with about 250 per cent upon its capital stock.

Mr. REED. Its capital stock being half a million dollars for 140 miles of main line.

The CHAIRMAN. I am figuring on the capitalization of the Pittsburgh, Bessemer & Lake Erie.

Mr. KENNEDY. I understand the Pittsburgh, Bessemer & Lake Erie is leased largely, and the Carnegie Steel Co. guarantees 4 per cent, or something of that kind, on the original stock, so that they have not much money in it.

The CHAIRMAN. On their $500,000 capitalization they are earning three or four millions.

Mr. REED. That varies from a deficit in 1908 to a couple of million in 1910.

Mr. BARTLETT. You know whether or not your experience and information is enough to give you the right to say what you deem to be a reasonable rate on ore?

Mr. KENNEDY. I should think I would be competent to give fairly an estimate—not as good as a man on the Pennsylvania Railroad, or anything of that kind, who studied it all the time.

Mr. BARTLETT. You have devoted a good deal of your time and labor to this sort of thing?

Mr. KENNEDY. I have had occasion to study it some. I am unfortunately president of a coke company which ships a good deal of ore.

Mr. REED. I think Mr. Bartlett and Mr. Kennedy both misunderstood my suggestion. I did not suggest that Mr. Kennedy is not competent to express an opinion, if he knows the facts. But I do not believe the committee has given him sufficient facts with relation to the Bessemer Road to warrant asking his opinion.

Mr. BARTLETT. Have you read the evidence about the rates on this road, about which you are asked, the Bessemer & Lake Erie, as to what it costs to operate it, and so on?

Mr. KENNEDY. Not very fully; no.

Mr. BARTLETT. You are familiar enough with the operations of railroads in hauling freight to state what would be a reasonable rate for that particular service generally, are you, Mr. Kennedy?

The rates on railroads are not fixed altogether upon the amount invested in stock or bonds, but what the railroad costs; and they ought to be permitted to earn a reasonable return. But at the same time the public is interested enough and has a right, no matter what the road costs, to have a reasonable rate for the particular service done. That is the rule as I believe it has been laid down by the Supreme Court, not whether it is a return for dividends to stockholders or whether it is making enough to pay the full interest on the bonds and interest, but what is the service worth. That is the rule, as I understand it.

Now, are you able to say what the service of hauling ore on this road is worth, from what information you have about it?

Mr. KENNEDY. I can give my opinion.

Mr. BARTLETT. That is all you are asked to give.

Mr. KENNEDY. I think it is worth about 40 cents.

Mr. Reed. From Conneaut to Pittsburgh?

Mr. Kennedy. Yes.

Mr. Danforth. Let us find out a little more about that, while we are on it. Mr. Kennedy is a competent witness. Let us see what he bases his opinion on.

On what do you base that estimate of 40 cents as the proper rate?

Mr. Kennedy. I base my estimate partly on a lot of investigations in connection with some coal rates from Pittsburgh to the Lakes, and some matters that have been up lately.

Mr. Reed. That is, the Boileau case?

Mr. Kennedy. Yes.

Mr. Reed. Where the Interstate Commerce Commission fixed the rate of 78 cents?

Mr. Kennedy. Yes; but the Interstate Commerce Commission intimated very strongly in their opinion that it probably should be lower, but they did not want to go too far the first time.

Mr. Young. You have no such scruples?

Mr. Kennedy. Oh, I don't know about that. I do not know if I were on the Interstate Commerce Commission I would put a rate down at once, where it really ought to go, if it had been high.

Mr. Young. Well, why would you not? If you felt it ought to go there and had confidence in your own judgment, why would not you put it down?

Mr. Kennedy. I do not know any reason why it should not, although a person might feel they ought to give them a little time to readjust themselves.

Mr. Young. Is not the real fact you do not feel absolutely sure it ought to be 40 cents, and that you would rather try a higher rate first and see how it resulted?

Mr. Kennedy. Well, I would not say I was absolutely sure of anything but death and taxes, but still I would have a good deal of confidence that 40 cents would be a pretty fair rate.

Mr. Young. But still, if the responsibility rested on you, you would not put it at 40 cents?

Mr. Kennedy. I might not have quite the courage of my convictions; I don't know how that would be.

Mr. Young. You think it would be a case of cowardice if you did not?

Mr. Kennedy. Possibly it would; yes.

Mr. Young. And it is not a lack of confidence in your own judgment that would cause you to fix a higher rate?

Mr. Kennedy. I don't know. If I were fixing the rate I would, of course, have more data than I have now, and would have more confidence in my own judgment.

Mr. Young. Then, if you did have more data, perhaps you would not arrive at the same conclusion; is not that true?

Mr. Kennedy. Possibly not quite, yes; that is true.

Mr. Young. Do you think your judgment on this matter would be better than that of the Interstate Commerce Commission on this rate from the Lakes to Pittsburgh or Pittsburgh to the Lakes?

The Chairman. The Interstate Commerce Commission has not passed on that, has it?

Mr. Young. It fixed a rate of 78 cents.

Mr. Reed. That is on coal.

Mr. Young. That is what I am talking about, Pittsburgh to the Lakes.

Mr. Kennedy. I would not like to express any opinion on the value of my own judgment. I will have to go by the general impression of the committee on that. If I did not have confidence in my own judgment, I would not be good for much.

Mr. Young. Well, you might have all the confidence in the world, Mr. Kennedy, and rightly so, in your judgment, on matters in which you have been principally engaged. Your judgment might not be as good on matters which you have only touched incidentally.

Mr. Kennedy. That is correct.

The Chairman. Now, Mr. Kennedy, assuming we have the statements of experts based on the most elaborate deductions, the most elaborate data, and carefully prepared opinions as to the cost of operating this railroad, and that we also have statements as to the cost, the actual cost, of transporting this ore—which I think. if I remember correctly, from the reports of the Bessemer & Lake Erie Road, shows the cost of transporting this ore is less than 30 cents a ton.

But, be that as it may, assuming that a fair price is 40 cents, as you have said, although Senator Oliver testified 20 cents, and I think, so far as I am concerned, that 40 cents would be an excessive rate——

Mr. Reed. Excessively high?

The Chairman. Excessively high for ore over that road, with the density of traffic and the facilities for transporting it.

But assuming that 40 cents is a fair and remunerative rate, and they charge 96 cents; that the Steel Corporation hauls its ore over that road, and other roads charge the same rate; what would be the difference to the manufacturers of pig iron, the competitors of the Steel Corporation, on the total cost of producing a ton of pig iron, say to Pittsburgh or the valleys?

Mr. Kennedy. With 50 per cent ore it would be $1.12 per ton of pig iron.

The Chairman. What would be your total difference, leaving out the Lake haul and dock charge?

Mr. Reed. Why do you double the 56 cents, if I may ask?

Mr. Kennedy. Two tons of ore to a ton of pig.

The Chairman. Which is $1.60—the first was $1.60.

Mr. Kennedy. $1.60.

The Chairman. $1.60 and $1.12?

Mr. Kennedy. That was under the assumption the rate was 40 cents; that rate, however, has been reduced.

The Chairman. Yes; I know. Now, taking a rate of 40 cents—the rate is 96 cents—say $1.12, and the other was what, $1.60?

Mr. Kennedy. $1.60 under the assumption I took.

The Chairman. What would be the total difference for a ton of pig iron?

Mr. Kennedy. $2.72.

The Chairman. What is a fair profit upon pig iron? At what profit per ton can you manufacture pig iron and sell it?

Mr. Kennedy. $2 would be considered a handsome profit.

The Chairman. Do you know anything about the prices charged? You say you have been vice president of a road and have had experience in shipping; do you know anything about the prices charged for shipping wheat and commodities like that generally?

Mr. KENNEDY. Oh, I have known about that, but I have not the figures by me now.

The CHAIRMAN. Do you know what it is approximately?

Mr. KENNEDY. I think it is about 3 mills per ton per mile from Chicago to New York. That is my recollection.

Mr. BARTLETT. Is that when it was hauled in bulk?

Mr. KENNEDY. Hauled in box cars.

Mr. BARTLETT. I mean in bulk or sack?

Mr. KENNEDY. No; I think loose in cars.

The CHAIRMAN. Which is the higher class freight, and which could be transported most cheaply—billets, pig iron, ore, or wheat?

Mr. KENNEDY. Wheat of course; there would be more risk of damage.

Mr. BARTLETT. Wheat would be the higher class of freight?

Mr. KENNEDY. Wheat would be the higher class; yes.

The CHAIRMAN. Explain that fully to the committee.

Mr. KENNEDY. It has to be protected from the weather. and is shipped in tight cars so that it does not leak out; it has to be handled more carefully than ore or coke, or substances of that kind.

Mr. BARTLETT. It would have to be unloaded more carefully?

Mr. KENNEDY. There would not be much choice there. They run it into an elevator and spout it out. But in case of wreck, if you spill all your wheat it is gone, but if you spill your pig iron or billets you can pick them up again, and unless they go in the river you do not lose them.

Mr. BARTLETT. What is the rate per ton on pig iron or billets?

Mr. KENNEDY. It varies enormously.

Mr. BARTLETT. Is it greater or less than wheat?

Mr. KENNEDY. That depends. I understand—this is hearsay; I suppose hearsay goes here to a certain extent.

Mr. REED. Everything goes.

Mr. KENNEDY. I understand a shipper of steel from Pittsburgh can go to Jersey City by going via the Steel Corporation road and then intersecting the east and west road before it gets to Conneaut, and get to Jersey City for 70 cents a ton. Mr. Reed would know more about that than I would.

Mr. BARTLETT. How would that compare with 3 mills per ton per mile for carrying wheat?

Mr. KENNEDY. That would compare very favorably.

Mr. BARTLETT. You mean it would be more or less?

Mr. KENNEDY. It would be less, I should say.

Mr. BARTLETT. How much?

Mr. KENNEDY. I should suppose it would be under 2 mills per ton per mile. On the other hand, coke from Connellsville and Youngstown goes 134 miles for 135 cents. It is 1 cent a ton-mile plus a cent.

The CHAIRMAN. How do you account for that difference, over the same road?

Mr. KENNEDY. This other is export business, and there are a great many vices in connection with it; a great many vicious things in connection with it. It is like the water haul at San Francisco that I mentioned this morning. You pay less freight to San Francisco than you do to Salt Lake City, although the stuff might go right through Salt Lake City. That is inequitable and vicious, of course, no matter if the Interstate Commerce Commission or anyone else says it is not.

Mr. BARTLETT. You said there were a great many vices in the rates, in shipping export business; give us some of them.

Mr. KENNEDY. I just got through giving one.

Mr. BARTLETT. That is where they charge less for the long than for the short haul.

Mr. KENNEDY. No; less for export business than for other business.

The CHAIRMAN. Do you know anything about the difference between the Bessemer & Lake Erie and other railroads on export business?

Mr. REEVES. Now, is that fair? You have had the tariffs of the Bessemer Railroad here. You can get exact information on that.

The CHAIRMAN. Yes.

Mr. REED. And it is not fair to ask Mr. Kennedy to give these things by hearsay and recollection when it is possible to get specific information from these sheets. No man can tell by looking at the rates whether they are fair or not.

The CHAIRMAN. I want to ask him about the rates, without naming any one rate. Do you know about the rates for export?

Mr. KENNEDY. I have been told by parties who are expert on rates that the export rates on the Pittsburgh district to Jersey City are $1.50, of which 80 cents goes to the Pittsburgh & Lake Erie, and 70 cents to the Trunk Line which intersects it.

The CHAIRMAN. Do you know how that compares with the domestic rate?

Mr. KENNEDY. It would be very much lower than the rate from Buffalo to Jersey City, domestic pig iron or steel to be used in New York. It would certainly cost more than that.

Mr. BARTLETT. Is it done for the purpose of competing with manufacturers in foreign countries, or to get the export business? What is the reason for it, that the railroads give that sort of rate? Is it to aid the business of exporting?

Mr. KENNEDY. It is pretty hard to state reasons for these things.

Mr. BARTLETT. What would be the business reason?

Mr. KENNEDY. The business reason for the rate of 70 cents for 40 miles and 80 cents for 100 miles?

Mr. BARTLETT. Yes. What would be the reason for giving the advantage to the exporter over the man who did not export? What would be the reason for charging a less rate per ton for a shipment destined abroad than to charge what they do charge from Pittsburgh to Jersey City?

Mr. KENNEDY. The reason is to aid the people in exporting material; to build up the foreign trade.

Mr. BARTLETT. Take the converse of that. Is that also true as to the manner of importing materials, hauling to the interior?

Mr. KENNEDY. Oh, yes; it is undoubtedly true.

Mr. BARTLETT. That same reason would not apply—that is, giving the foreigner the advantage—to compete with our own people the other way, would it?

Mr. KENNEDY. Yes. The foreigner can, I am told and I think correctly, ship, for instance, plate glass from Belgium to Chicago for less than the Pittsburgh plate-glass factory can ship to Chicago.

Mr. BARTLETT. But they ship crockery ware and porcelain ware right through into Ohio and other places, by East Liverpool, which manufactures it on these very roads themselves, and the foreigner gets a cheaper rate from the seacoast into the interior than the manufacturer does to the coast.

Mr. KENNEDY. Yes; I have no doubt the foreigner even gets a cheaper rate from Europe to Chicago than the rate from East Liverpool to Chicago on pottery. I have been told so, and I think it is correct.

Mr. BARTLETT. That was true in a case that went to the Supreme Court of the United States from New Orleans.

Now, the reason that it is given for the purpose of building up a foreign trade would not apply in this case, but that it was put in for the purpose of enabling the foregner to build up his trade in this country? So that the reason given for the one would not apply in the other.

Mr. KENNEDY. Oh, reasons are thick as blackberries, but all of them bad.

Mr. DANFORTH. One reason is to get the tonnage, is it not?

Mr. KENNEDY. I don't know. I don't know whether tonnage is any advantage to the road with such rates.

Mr. DANFORTH. They would not do it if it was a disadvantage to them to take it, I should think.

Mr. BARTLETT. Is not another reason for allowing them to come in——

Mr. DANFORTH (interposing). Suppose you let the witness answer. My statement was rather a query. I would like to know what his views are.

They would not take the tonnage on those roads for the long hauls unless they saw some advantage in it, would they, at those reduced rates?

Mr. KENNEDY. They might.

Mr. DANFORTH. What circumstances could induce them to take it if they did not see any advantage in it? What can you suggest as a reason, except that they saw an advantage in the rate?

Mr. KENNEDY. Well, I think if you would put up those rates to them and ask them to use them as a guide to make domestic rates they would tell you they would not be remunerative; that they would lose money on every ton they shipped on it.

Mr. DANFORTH. That does not answer my question. That is simply giving me what has been, perhaps, the result of your personal observation.

Mr. BARTLETT. Well, the Interstate Commerce Commission decided the other day, or a few days ago, that a railroad would have to give to the interstate shipper the same proportional rate that it gave to the intrastate shipper—required to do so by the State commission. Now, would not that same rule seem to apply to the railroads in the country as to foreign freight, freight coming from foreign countries or going to foreign countries?

In other words, the State of Georgia requires the railroad from Atlanta to Savannah to charge no more than a certain amount upon certain kinds of freight. The Interstate Commerce Commission say that that road when it comes to fix interstate rates, if the freight goes over the same line, must not charge any more than is allowed by the State railroad commission to be charged for like service when it gets into the State.

If that is a correct rule, then a road ought not to be permitted to charge more for domestic freight, I will call it, than it does for freight coming from a foreign country, ought it?

Mr. KENNEDY. I should say not. I should say, in my opinion, a road should not be allowed to haul freight either for import or export for less than they haul domestic freight.

Mr. BARTLETT. Does not the effect of this permitting importers, or freight coming from a foreign country, and hauling it into the interior from the port, to pay less rates from the port to the interior than are allowed the domestic shipper from the port to the interior, does not that virtually interfere with the protection that the domestic manufacturer has by reason of the tariff?

Mr. KENNEDY. Undoubtedly.

Mr. BARTLETT. And is it not really a way of getting around the added cost of the article which the tariff puts on it when it gets to the port?

Mr. KENNEDY. It is.

Mr. BARTLETT. In other words, if East Liverpool, on its crockery or porcelain, whatever it manufactures there, stuff of that character, sells it to the domestic consumer at a price plus the tariff—that is the admitted thing now. Even the President of the United States in his message yesterday admitted that.

Mr. YOUNG. Admitted by some people.

Mr. BARTLETT. I said admitted even by the President of the United States.

Mr. YOUNG. You said admitted. I said admitted by some people.

Mr. BARTLETT. I said admitted even by the President of the United States yesterday in his message.

Mr. KENNEDY. He did not admit it. He stated it as a fact.

Mr. BARTLETT. Well, he did not deny it; that is true. It is a fact.

Now, if that be true, whether admitted or disputed, that the tariff is added to the price which the domestic consumer pays to the manufacturer of the article upon which the tariff is imposed, and the freight rates from the ports to the foreign country are lower than they are to the domestic manufacturer, does not that in a great measure interfere with and get rid of the protection the manufacturer has by reason of the tariff?

Mr. KENNEDY. Undoubtedly.

Mr. BARTLETT. The freight is always added as a part of the cost when you go to sell an article?

Mr. KENNEDY. Yes.

Mr. BARTLETT. And the less the freight the less you can sell the article for?

Mr. KENNEDY. Yes.

The CHAIRMAN. As I understand you, then, or rather as I understand Judge Bartlett, these discriminations in freight rates on imports are made in order to secure the freight. If the same rates were charged to the importer that are charged on the domsetic articles, the tariff duty would act as an absolute prohibition. In order to get its freight at all the railroad must haul it at these very low rates in order to import it at all. Is that your idea?

Mr. KENNEDY. That may be the case.

The CHAIRMAN. What is the cost of producing a ton of standard steel rails, say, in Pittsburgh—Bessemer rails, open hearth, or both?

Mr. KENNEDY. It will only be a guess on my part. I have not the exact data for it.

Mr. YOUNG. I think we ought not to have guesses.

The CHAIRMAN. Have you made steel rails?

Mr. KENNEDY. Yes; I have made steel rails, but it was some years ago. I have not been in the manufacture recently. I have been engaged more in the construction of plants.

The CHAIRMAN. What, in your opinion——

Mr. YOUNG (interposing). It seems to me when the witness says it would be only a guess, we ought not to take it. We have a lot of information from men who claim to know, though they do not all agree.

Mr. BARTLETT. I will ask you this: Have you built plants for the manufacture of steel rails?

Mr. KENNEDY. Yes.

Mr. BARTLETT. Have you done any estimating as to the cost of making steel rails?

Mr. KENNEDY. Not recently.

Mr. BARTLETT. How long ago?

Mr. KENNEDY. In a very general way, I know if you put $7.50 on pig iron and add $12 you will get about $19.05, which would be a safe price for which you could make them.

Mr. BARTLETT. You do not mean to say you are not somewhat familiar——

Mr. KENNEDY. I am somewhat familiar, but not down to the last cent, like a man actively in the mills.

Mr. BARTLETT. You do not mean to say you are not familiar at all with the cost?

Mr. KENNEDY. No. In a general way I am familiar, but I have not been in the manufacturing business to the extent of keeping track of costs down to exactness—to the fine point, as you might call it.

The CHAIRMAN. You have operated rail mills as well as constructed them, have you not?

Mr. KENNEDY. Yes.

The CHAIRMAN. And in operating you then had to make very careful calculation as to the cost when you were operating?

Mr. KENNEDY. When operating them a careful record was kept of the costs. You are expected always to get it 10 cents cheaper the next year or the next month. The pressure is always on to make all the economies you can.

Mr. BARTLETT. You then had to calculate as to every item of cost?

Mr. KENNEDY. Yes. The manufacturers keep a very accurate record of cost, but I have not been in touch with that end of it for some years.

Mr. BARTLETT. How many years ago?

Mr. KENNEDY. Oh, it has been 20 years since I made any rails.

Mr. BARTLETT. Has not the process of manufacturing rails cheapened? Can you not manufacture them cheaper now than you could 20 years ago?

Mr. KENNEDY. No.

Mr. BARTLETT. The price has kept up about the same for 20 years?

Mr. Kennedy. You will notice in your own records here the testimony of witnesses that they made good money on selling rails at about $17.

Mr. Bartlett. Yes; I know; that was in 1899.

Mr. Kennedy. And they have made them at the cheap cost of $12. I think possibly that was rather exceptional; it must have been for one month alone.

Mr. Bartlett. That was Mr. Schwab.

Mr. Kennedy. But prices would be higher now.

Mr. Reed. I should think they would.

Mr. Kennedy. Because costs in all lines have gone up.

Mr. Reed. The cost of pig iron alone would make considerable difference.

The Chairman. Take the cost of mining ore, transporting it, erecting mills, securing labor, what would you say was the difference in cost of manufacturing a ton of steel rails now and the cost in 1900?

Mr. Kennedy. Oh, I should suppose $3.

Mr. Bartlett. Is $19.50 your opinion of the cost of the production of steel rails; does it mean the standard steel Bessemer rail?

Mr. Kennedy. The standard steel Bessemer rail I should guess at about $18 for a company like the corporation, and open-hearth rails a dollar or a dollar and a half more.

The Chairman. How does the cost of producing rails in this country compare with the cost of producing rails in Great Britain—the standard rail?

Mr. Young. Does the witness know?

The Chairman. I did not think it was necessary, Mr. Kennedy, to be continually repeating these qualifying questions.

Mr. Young. Here is a man who has not made steel rails for 20 years, and because he is an able man—an able engineer—it does not follow he knows about that.

The Chairman. In this mill you lately constructed, was there a rail mill connected with it?

Mr. Kennedy. Yes.

The Chairman. Have you ever studied the rail mills and the conditions of manufacture in Great Britain?

Mr. Kennedy. Not closely with reference to cost of late.

The Chairman. Well, are you generally acquainted with the conditions under which steel is manufactured there?

Mr. Kennedy. I know in a general way there is not much difference in cost between this country and Great Britain at the present time, because I can judge of it by figures that are tendered for rails for export now, which are pretty close figures generally. I know that they run very close between this country and Great Britain, and I can reason from that.

The Chairman. Do you know about general conditions in Germany, as to the cost of producing rails, say, at the steel works at Essen?

Mr. Kennedy. Not exactly; no.

The Chairman. How do the labor costs here compare with labor costs in the Old World in producing rails? Is there any material difference?

Mr. **Kennedy.** I should say the labor cost was somewhat less here per ton than there. The mills are larger and there are fewer men around them—less hand work done.

Mr. **Bartlett.** You mean by that that while the furnace may pay less per diem wages, that in the long run, in the end, the result is that the labor cost of producing a ton of rails is as great abroad as it is here?

Mr. **Kennedy.** I think you will find the labor cost in Germany will be as great per ton as here. The wages will be less, but I think you will find the men not doing as much in the steel mills; they are not geared up so high.

Mr. **Bartlett.** While the wages may be less than ours are here the product of the labor here is greater per man, and in the end the result is, in Germany and in foreign countries that manufacture these steel rails and other steel products, they pay as much for the production of a ton of steel rails or other products of that kind as do the manufacturers in this country. Is that right?

Mr. **Kennedy.** I think the labor in the mills per ton will be as high as here.

Mr. **Bartlett.** So that in determining the cost of production abroad per ton and the cost of production here per ton we will find that the foreigner is taxed as much for labor in the production of a ton as we are.

Mr. **Kennedy.** I think so.

Mr. **Bartlett.** And even more?

Mr. **Kennedy.** In the steel mills?

Mr. **Bartlett.** Yes; I mean in this particular business.

Mr. **Danforth.** How much more efficient is our machinery in calculating the cost of a ton of rails?

Mr. **Kennedy.** Well, part of what I have spoken of is due to the machinery. We do more by machinery and do not do as much hand work in our mills as is done in Germany.

Mr. **Bartlett.** In the matter of the sales price, do you know whether or not our manufacturers of rails or of steel products can or do compete in foreign markets with the foreign manufacturers of like products?

Mr. **Kennedy.** I know that they sell rails abroad to a considerable extent. Whether it is in competition or not I would not like to express an opinion.

Mr. **Bartlett.** Well, they sell them.

Mr. **Kennedy.** Yes.

Mr. **Bartlett.** And sell them at the same price the foreigner sells them abroad?

Mr. **Kennedy.** I think practically the same, but I do not know as to the exact cent.

Mr. **Bartlett.** I do not ask as to the amount. Do you know how the prices abroad for American manufactured steel products compare with the prices asked here?

Mr. **Kennedy.** I know, in a general way, they are somewhat less, although not always. Sometimes export business goes as high in price as domestic, possibly sometimes a little above.

Mr. **Reed.** You mean the laid-down price abroad averages less than the price here?

Mr. **Kennedy.** Yes—no; I mean the price here.

Mr. REED. Received at the mill.

Mr. KENNEDY. The price at the mill averages, as a general rule, less for export stuff than for home stuff, although not always. Sometimes, under special conditions, it may run even higher.

The CHAIRMAN. Now, Mr. Kennedy, do you know of any country making rails that can import them into this country, even if we had no duty, in competition with rails made here?

Mr. KENNEDY. No; except on the Pacific coast it might be possible to put them in.

The CHAIRMAN. Do you know, generally speaking, the metallic content of ores that are used in Germany and Great Britain, and how it compares with Superior ores?

Mr. KENNEDY. Not exactly. Great Britain and also Germany are using Swedish ores, which are high in metallic content, and also Spanish ores. I do not think there is very much difference, on the whole.

Mr. BARTLETT. I would like to ask this question. He says if there was no tariff on steel products—steel rails, we will put it—that the foreigner could not compete except on the Pacific coast?

Mr. KENNEDY. No; you misunderstood me. I did not say that. Perhaps I misunderstood the question.

The CHAIRMAN. I asked you if it would be possible for any foreign manufacturer to produce steel rails and lay them down in this country in competition with ours?

Mr. KENNEDY. I assumed the present tariff conditions would maintain.

The CHAIRMAN. No. Without any tariff. Could they produce them at a sufficient cost to undersell us? I do not mean at the present rate of $28 a ton. I mean if there was competition in rails and no tariff.

Mr. KENNEDY. No; I do not think they could, except in certain portions of the country. I have no doubt that in Texas, for example, and on the Pacific coast they might.

The CHAIRMAN. And how about in the body of the country?

Mr. KENNEDY. I do not think they could put steel rails in Pennsylvania, for example.

Mr. YOUNG. Not in Philadelphia.

Mr. KENNEDY. No.

The CHAIRMAN. Nor in any inland market?

Mr. KENNEDY. No.

Mr. DANFORTH. Down in Texas why has not the Tennessee Coal & Iron Co. the advantage?

Mr. KENNEDY. I expect you could ship from London for less than from Birmingham. I don't know what the freight rates are.

The CHAIRMAN. Mr. Kennedy, I will ask you, generally speaking, what is the cost of producing a ton of ordinary structural shapes?

Mr. REED. Mr. Chairman, Mr. Kennedy has been asked to testify as an expert on railroad rates as to railroads he has never seen and the cost of making rails in Germany, including this country. Don't you think it is going almost beyond all bounds to ask him the cost of making structural shapes without showing that he has had any experience at any time?

The CHAIRMAN. I will ask him. Have you ever operated mills making structural shapes?

Mr. KENNEDY. Yes; but I have not kept track of the exact costs of late.

Mr. YOUNG. How long ago was that that you did that?

Mr. KENNEDY. Twenty years ago.

The CHAIRMAN. Have you since that time constructed mills making these structural shapes?

Mr. YOUNG. That does not change the question.

The CHAIRMAN. Have you kept up generally with prices as to the cost of manufacture, and kept up with the business?

Mr. KENNEDY. No; I have not watched that, as I say, with the view to keeping posted like a sales agent would as to current prices.

The CHAIRMAN. Do you know anything of the facilities for manufacturing structural shapes in this country and abroad?

Mr. KENNEDY. Yes.

The CHAIRMAN. Can we manufacture them as cheaply as they can manufacture them abroad?

Mr. KENNEDY. Yes; I think we can.

The CHAIRMAN. I find, from page 1770 of the hearings, volume 24—I have compared these figures—that the foreign price of structural shape as furnished by the Steel Corporation in 1906 was $29.58 a ton, and that at that time the domestic price, as given by the American Iron and Steel Association, was $38.84 a ton, making a difference between the domestic and foreign price of $8.26 per ton.

To what do you attribute that difference? How is that possible?

Mr. KENNEDY. I can only account for that by the assumption that the foreign market would not allow any higher price than that.

The CHAIRMAN. Would that situation of affairs have been possible without a heavy duty on those things, or a duty equivalent to the difference?

Mr. KENNEDY. No; I judge it would not.

The CHAIRMAN. Who are our principal competitors in tin plates?

Mr. KENNEDY. Wales.

The CHAIRMAN. Is there any duty on tin plate in Wales? Does Great Britain impose any duty on tin plate imported from that country?

Mr. KENNEDY. I think not.

The CHAIRMAN. I find from the same figures that in 1906 our domestic price for tin plate was $3.65 per hundred pounds gross, and the foreign price was $2.85 a hundred pounds, making a difference of $18.91 per gross ton. Do you know whether they can manufacture tin plate in this country at practically the same price that they do in Great Britain, or not?

Mr. KENNEDY. I do not think they can manufacture them as cheaply as Wales. Tin plate has a large amount of labor on it. It differs from pig iron.

The CHAIRMAN. Could these plates have been sold for $18.91 a ton less?

Mr. REED. Those are the prices per box.

The CHAIRMAN. Per box, 100 pounds to the box. But I am estimating it by the ton.

Mr. REED. I never heard tin plate quoted by the ton; that is all.

The CHAIRMAN. Call it for 10 boxes.

Mr. DANFORTH. That would be half a ton.

The CHAIRMAN. Or 2,000 pounds. It does not take but a minute to figure it. The figures are admitted here. It is a difference of $2.85 and $3.69, a difference of 84 cents a hundred.

Mr. YOUNG. What is the foreign price?

The CHAIRMAN. $2.85.

Mr. YOUNG. What kind of a price is that?

Mr. REED. Per box.

Mr. KENNEDY. One hundred pounds; that is cents, 2.85 cents per box.

Mr. REED. That is the price received at the mill per box.

Mr. YOUNG. That is the mill price?

Mr. REED. Yes, sir.

Mr. YOUNG. What is the domestic price of $3.69?

Mr. REED. That is something the chairman has there; I don't know what that is.

The CHAIRMAN. That is calculated per gross ton.

Mr. YOUNG. No; about this $3.69. Where and by whom is that price made?

The CHAIRMAN. That is the average price per box.

Mr. YOUNG. Where and by whom?

The CHAIRMAN. Here at home.

Mr. YOUNG. By whom?

The CHAIRMAN. The Steel Corporation.

Mr. REED. That includes all steel companies, does it not?

The CHAIRMAN. No, sir. This is the steel company's price. Look at page 1770.

Mr. YOUNG. But you are not reading from 1770.

The CHAIRMAN. These are compilations from page 1770.

Mr. YOUNG. These things?

The CHAIRMAN. Yes, sir; all of them. Get tin plates there and compare them. I think you will find them correct.

Mr. YOUNG. In 1906 the invoice price given here is $3.16. That is for export.

Mr. REED. The chairman seems to be comparing our net prices on export business on the average domestic prices received by the manufacturers during that year.

Mr. YOUNG. Where is the table that gives the prices?

Mr. REED. The table from which he is reading was in the Financial American of September 8, 1911.

Mr. YOUNG. That does not seem to be a foreign price; that seems to be a price for export here.

The CHAIRMAN. That is the price that the steel corporation has given us, the export price. That is the price it charges on those things when they are to be exported.

Mr. YOUNG. Yes; that is what I understand. But the chairman stated it as the foreign price.

The CHAIRMAN. I mean the price charged by the mills here on those articles, not when sold here, but when exported.

Now, would there be a difference of 84 cents a hundred pounds on a box of tin plates sold here and the same plate sold abroad, if tin plates were admitted into this country free of duty? Would you have that difference, in your opinion, on a lower duty? I find the duty on in plates is $44 a ton, according to paragraph 130 of the tariff act of 909, which reads as follows:

> 130. Sheets or plates of iron or steel, or taggers iron or steel, coated with tin r lead, or with a mixture of which these metals, or either of them, is a comonent part, by the dipping or any other process, and commercially known as tin lates, terne plates, and taggers tin, one and two-tenths cents per pound.

Mr. KENNEDY. Will the stenographer please read the question?

The stenographer read as follows:

> Now, would there be a difference of 84 cents a hundred pounds on a box of tin plate sold here, and the same plate to be sold abroad, if tin plates were admitted into this country free of duty? Would you have that difference, in your pinion, on a lower duty? I find the duty on tin plates is $44 a ton.

Mr. KENNEDY. You could have this difference with a tariff of $16 a ton. If there were no tariff you could not have so much difference.

The CHAIRMAN. Can you give me an idea, approximately, of the difference in labor costs between the production of tin plates here and abroad, in Wales?

Mr. KENNEDY. It is quite considerable; I could not tell you exactly, but I imagine about twice as much here as there—I should think at least six or seven dollars a ton difference, but I do not know exactly.

The CHAIRMAN. Is there any such difference as $18 a gross ton between the labor cost here and abroad?

Mr. KENNEDY. I should not think so.

The CHAIRMAN. Is the labor cost on a ton of tin plate produced here $18, would you say?

Mr. KENNEDY. I should say not over that, but I do not know exactly.

The CHAIRMAN. Do you know whether the manufacturers of tin plate in Great Britain employ domestic or foreign labor? Do they import their labor or do they employ domestic labor for the manufacture of tin plate?

Mr. KENNEDY. I think domestic, but I would not say positively that in all cases it would be.

The CHAIRMAN. Have you read this article in the Atlantic Monthly by Mr. Goode?

Mr. KENNEDY. No; I have not read that.

The CHAIRMAN. It is the article in which he discusses the falling off of our exports since the formation of the United States Steel Corporation.

Mr. KENNEDY. No; I have not seen that.

The CHAIRMAN. Have you made any study of that question?

Mr. KENNEDY. No.

Mr. REED. Do you say the falling off of our exports in steel?

The CHAIRMAN. Yes; relatively. He makes the statement that relatively we have declined very much in the exportation of steel.

Mr. YOUNG. Or we have not increased as rapidly as Germany.

The CHAIRMAN. I say, relatively.

There has been a good deal of discussion lately as to the cause of broken rails. To what do you attribute the breaking of rails? What is the cause of it? Is it in the manufacture of rails, the construction of engines, or what, Mr. Kennedy, if you know?

Mr. REED. The chairman thinks Mr. Kennedy is omniscient.

The CHAIRMAN. I do mighty near in this business.

Mr. Bartlett. There was some discussion the other day between the railroads and manufacturers.

Mr. Kennedy. Yes.

Mr. Bartlett. Mr. Farrell testified about that also, did he not?

Mr. Reed. Yes. That is Mr. Farrell's business.

The Chairman. As an expert; not making them.

Mr. Danforth. He made them for quite a while.

The Chairman. I do not mean to discredit what Mr. Farrell said, nor do I question Mr. Farrell's ability as an expert. I might weigh his interests, but not question his ability.

Mr. Bartlett. Mr. Farrell said the demand for heavier rails and harder rails had been such that they would not stand the pressure as much as a softer rail.

Mr. Reed. The railroads demanded such a high carbon percentage it made the rails brittle.

Mr. Bartlett. I read about that the other day, in regard to an investigation of a broken rail accident, where there was some such statement in the paper as that.

Mr. Kennedy. I would like to have the question read.

The stenographer read as follows:

> The Chairman. There has been a good deal of discussion lately as to the cost of broken rails. To what do you attribute the breaking of rails? What is the cause of it? Is it the manufacture of rails, the construction of engines, or what, Mr. Kennedy, if you know?

Mr. Kennedy. Anyone who has noticed railroads for the last few years must have seen that the wheel loads have come up enormously.

Mr. Young. That is, the weight upon each wheel.

Mr. Kennedy. The weight upon each wheel has been enormously increased. You must also have noticed the great size of the engines and also that the driving wheels of engines are counterbalanced on one side to balance the weight of the rods, which gives a hammer below to the rail at every revolution of a wheel. There has also been a tendency in late years to run trains faster, especially heavy freight trains. This makes the work on the rails extremely severe. If the rail is soft the head will flow and spread. If the rail is made very high in carbon, with a view to preventing this, there then comes more danger of breakage, especially in very cold weather.

The work put on the rails now is extremely severe, and a person standing close to the tracks and seeing a fast express train go by wonders that the rails stand at all.

I think the particular cause of breakage is due to the fact that the rail has been given such an immense increase in severity of treatment, as compared with that which prevailed some years ago, that it is hardly to be expected that it would stand up under it.

I think the rail makers are studying this very carefully now, and I have no doubt that a still heavier section of rail will be adopted if the present high speeds and heavy wheel loads are maintained.

The Chairman. Does the driving wheel of an engine, moving at 40 or 50 miles an hour, actually leave the tracks with the revolution of the wheel, so as to strike it literally a blow?

Mr. Kennedy. Yes; it is simply a matter of computation, having given the weight of the counterbalance in the wheel, to find the speed at which it does leave the track. But I believe almost any ordinary locomotive wheel, when running about 65 miles an hour, actually leaves the rail on each revolution.

The CHAIRMAN. Do you know of any experiments by which the extent to which it leaves the track has been measured?

Mr. KENNEDY. Yes.

The CHAIRMAN. By physical demonstration, as well as by calculation?

Mr. KENNEDY. This has been gone into at Purdue University, Ind., where they place their locomotives on fixed wheels and run them up to high speeds, from time to time running small lead wires between the wheels. This will show whenever the driving wheel leaves the supporting wheel; at a certain speed it actually lifts from it at every revolution.

Mr. BARTLETT. You spoke about severe treatment. I am not familiar enough with the manufacture of rails to know what you mean by that.

Mr. KENNEDY. Well, you put a very heavy wheel on a rail——

Mr. BARTLETT (interposing). I understand that, but I inferred from what you said about the severe treatment of the rail you meant in the manufacture.

Mr. KENNEDY. No; in the track. That is the hammer blows which I speak of increased more rapidly; as the square of the split was doubled the speed gives four time as much for that action.

Mr. BARTLETT. A softer rail would not break as quickly.

Mr. KENNEDY. A softer rail would not break so quickly, but it has a tendency to flow and spread and crush down on the head.

Mr. REED. In other words, it wears out.

Mr. KENNEDY. It wears out, actually deforms, flows like lead in a wheel.

Mr. BARTLETT. And a rail that does not break will last longer, will it?

Mr. KENNEDY. Yes; the hard rail, if it does not break, lasts considerably longer than the soft one, very much longer.

Mr. BARTLETT. Mr. Farrell testified that the railroads were demanding a harder rail that lasts longer.

Mr. KENNEDY. Yes. It is very expensive for railroads to keep pulling out their rails and replacing them every few months. They want a rail that lasts.

Mr. BARTLETT. Do you think that indicates that the hardness of the rails has been due to the demand of the railroads that they be given a rail that lasts longer?

Mr. KENNEDY. No. They want to make them as hard as they can and keep them safe.

Mr. BARTLETT. I did not mean to say there was any disregard of human life. Mr. Farrell thought the railroads were constantly demanding a rail that was harder because it lasts longer.

Mr. KENNEDY. I suppose that is true. That is only natural.

Mr. BARTLETT. I read in an account of this meeting in New York some time ago, after a disaster, in which a committee was appointed—I have not seen any report yet made by that committee—to investigate that question.

Now, these rails are made harder, are more highly carbonized, I believe. Does it cost more to make them than it does a softer rail?

Mr. KENNEDY. No; I think not any more. It is just a matter of judgment to get it as hard as you can without getting it to break. The rail should be as hard as you can get it without danger, and it is a nice job to determine how high you can go.

Mr. BARTLETT. It is no more cost to the steel manufacturer to make a rail that will not break as quick than to make one that does break more quickly.

Mr. KENNEDY. No; I think it costs about the same.

Mr. REED. It is only a difference of a few pounds of coal dust.

Mr. BARTLETT. So that the purpose, then, of making a steel rail softer—I will use that word—is not to diminish the cost of producing the rail?

Mr. KENNEDY. Not at all.

Mr. BARTLETT. But to make one that will last longer.

Mr. KENNEDY. It is simply a question of which one is best, all things to be considered. If you get it too soft, it wears out quickly, and if you get it too hard it breaks.

Mr. BARTLETT. There is no advantage to the steel manufacturer to make it softer or harder?

Mr. KENNEDY. None at all.

The CHAIRMAN. I called your attention this morning to the fact that pig-iron capacity of the Steel Corporation was 16,000,000 tons. And that its pig-iron production was 11,000,000 tons; that its steel ingot production exceeded its pig-iron production by, say, approximately 2,000,000 tons. For instance, I find that in 1902 the pig-iron production at that time—I have some figures before me, from page 3643 of the record, from Mr. MacRae's report, containing the answer of the Steel Corporation, and I quote now from the answer of the Steel Corporation itself:

> Pig-iron production, 7,800,000 tons—

I do not give the exact figures, you understand.

Mr. REED. I understand.

The CHAIRMAN. I am giving them in round numbers.

While its ingot production was 9,700,000, roughly speaking, its ingot production exceeded its pig-iron production by 2,000,000 tons.

I find from the minutes of the Steel Corporation that there is continual reference made to the purchase of pig iron for various times. For instance, in the minutes of the executive committee, or maybe the finance committee, at any rate, it is on page 3817 of the record, Mr. MacRae's report, part 2:

> Present: Gary (chairman), Schwab, Perkins, Converse, Edenborn, Reid, Gayley—

That is the board of directors, is it, or the executive committee?

Mr. REED. What page is that?

The CHAIRMAN. 3817. It is, I think, the executive committee:

> The president stated that he would like to obtain the views of the committee in regard to the advisability of the purchase of 30,000 tons of pig iron, at $18.50 for the third quarter of 1903, and for which we would exchange coke at the rate of $3 per ton; that we will require about 100,000 tons in that quarter.

And so on.

I find another reference where they discussed the advisability, at a meeting of the executive committee, of purchasing 2,000,000 tons of pig iron.

I find also, from the minutes of the Steel Corporation, where the statement is made that this purchase was advisable—I do not give the exact language, but I give the idea—in order to give stability to prices on pig iron.

Now, is it economy to close blast furnaces, where they can run and you can utilize their output, and open up again—run them intermittently?

Mr. KENNEDY. It would not be economy to close them for a short time and start them up often. It is easy to shut them down if you want to stop for a month or two, and then start up again.

The CHAIRMAN. Why should a blast furnace to be run economically be run regularly? Explain that to the committee.

Mr. KENNEDY. It would not be good policy to shut down a blast furnace once a week, because it always disorganizes it and puts it out of condition, and it takes two or three days to get it straightened around again. But I take it that would be different if you wanted to stop for a month and then start up again.

The CHAIRMAN. I believe that is the reason given for running blast furnaces on Sunday.

Mr. KENNEDY. Yes.

The CHAIRMAN. That it is a metallurgical necessity to keep running them after they are started.

Mr. KENNEDY. Yes.

The CHAIRMAN. The continued shutting down and opening up and starting the blast furnaces is an expensive operation.

Mr. KENNEDY. If you stop blast furnaces often and start them up again they do not work very well for the next 24 hours.

The CHAIRMAN. I find this statement by Mr. Gary. He states:

> It would be better to even shut down some of our high-priced furnaces and be purchasers; that the price of our finished steel products being regulated by the price of pig tin, we ought not to be endeavoring to get the cheapest iron; that we ought to maintain the price by little purchases; that $1 a ton is such a little thing compared with the advantages we receive in the finished products; that if we had purchased pig iron there would not have been the present downward tendency in it.

Now, as a practical steel man, I will ask you to tell me what advantage it is to the Steel Corporation to pay a dollar more for pig iron than the market price, and to so conduct their business as to have it raised a dollar a ton?

Mr. KENNEDY. Well, steel companies often sell semifinished material, such as billets, based on Iron Age quotations for pig metal. Of course, if the price of pig metal becomes demoralized, it would lower the price of their billets, and it might be good policy to try and steady that price and prevent it from dropping.

The CHAIRMAN. That is, prices of the finished steel products or semifinished products sold for future delivery are not sold at a fixed arbitrary price, but upon a sliding scale, based upon the price of pig iron at the time of delivery of the consignment.

Mr. KENNEDY. In some cases billets are sold for a year ahead. If one company should sell for another company, their requirements for billets for finishing steel a year ahead is often predicated upon the price of pig iron from month to month, taken from the Iron Age.

Mr. BARTLETT. The market for manufacturing pig iron is liable to go down, and to steady the market you buy for the purpose of keeping it up—that would be like the man on the race track or in the stock market hedging his bet.

Mr. KENNEDY. Possibly, somewhat, on general principles.

The CHAIRMAN. As I understand you, the purchase is made for, say, a year ahead, and the price is fixed at the time of delivery.

Mr. KENNEDY. Yes.

The CHAIRMAN. If they can, by buying or selling pig iron regulate the price, they can in that way fix the price of this material.

Mr. KENNEDY. Yes. If they can prevent a slump in the price of pig iron they will prevent a slump in the price of billets.

The CHAIRMAN. Do you know of any other reason why the Steel Corporation should purchase pig iron, if it had the capacity to produce it in the blast furnaces, except to regulate the price?

Mr. KENNEDY. Not unless they could buy some cheaper than some of their furnaces could make it.

The CHAIRMAN. Is cement made from slag?

Mr. KENNEDY. Yes.

The CHAIRMAN. Do you know anything about the profit in this business, what it costs to make cement and what it sells for?

Mr. KENNEDY. Not exactly.

Mr. REED. My experience in objecting has been so discouraging that I rather hate to do it, but I will have to object to that, as Mr. Kennedy is not an expert on cement. He has not even made that 25 years ago.

The CHAIRMAN. It is not usual that I question witnesses in this way, as I have been questioning Mr. Kennedy, as you know. But after talking with Mr. Kennedy about this business and hearing other people speak of him, and knowing he has been continually in these mills, constructing them, and keeping up with the business, I assume that he has that general knowledge of the manner in which the business is conducted, to give us a very just and a very reliable statement as to the approximate cost of these articles.

Do you know, Mr. Kennedy?

Mr. KENNEDY. Some years ago I made a very careful investigation of this question, in connection with Lehigh Valley plants. At that time the cost of making cement was about 55 to 60 cents a barrel, and the selling price ran from 90 cents to $1 a barrel. I judge the slag cement does not vary a great deal from the other.

Mr. YOUNG. It sells for a good deal less than that now, does it not?

Mr. KENNEDY. No; I think not much less than $1 a barrel.

Mr. YOUNG. I am so unfortunate as to own some stock in one cement company. I would be very glad if we could get $1, or even 90 cents.

Mr. KENNEDY. Possibly I am thinking of the price at the other end. But you can tell me whether 55 cents is about right for the mill cost.

Mr. YOUNG. I guess you are not very far off, for the very best plants.

Mr. KENNEDY. I have investigated some very good ones. The corporation's plants are good plants, however; they are very modern.

The CHAIRMAN. Do they make cement from slag in India?

Mr. KENNEDY. No.

The CHAIRMAN. It appears the first break in the harmony, the general disposition to concur in opinions which prevailed at the Gary inners, occurred when the Republic Iron & Steel Co. served notice hat they would not any longer cooperate with their brethren in the ale of bar iron.

Do you know, Mr. Kennedy, whether this making and finishing the ar iron is conducted by a great number of concerns?

Mr. KENNEDY. Yes; there are a good many concerns which make ars.

The CHAIRMAN. Is there considerable competition in that business mong smaller concerns?

Mr. KENNEDY. There is very apt to be.

The CHAIRMAN. Is the merchant bar a more highly finished prodct than the steel rail? Does it cost more to make a ton of ordinary ıerchant bar, such as agricultural implements are made of, than a ton f steel rail?

Mr. KENNEDY. About the same for the rougher qualities of bar. ome others go higher, some agricultural bars of high carbon steel, nd even when you get them higher there is no uniform price. Ordiary bars for reenforcing concrete, and that sort of thing, requiring ot much finish, I should think they would be as cheap as steel rails) make.

The CHAIRMAN. Take the plate bars, from which tin plate is made, p to the point of the bar, where the bar is used in the rolling of the .n plate. How does the cost—I mean now the cost of materials, ;aving out the labor cost of producing that plate bar—how does the ɔst of producing a ton of those plate bars compare with the amount f capital necessary to be invested in machinery to convert that plate ar into tin plate?

Mr. KENNEDY. It would be considerably larger up to the tin bar ıan it would be beyond that. I should suppose three or four times s large.

The CHAIRMAN. At that point in the manufacture of tin plate, the ɔlling of the plate bars, in the manufacture of nails, and the makıg of wire—are these finishing mills necessarily integrated like the ıills for the manufacture of billets, which require large capital?

Mr. KENNEDY. Not to the same extent. They can be put up in nall units if it is desired.

The CHAIRMAN. Is there any great economy—can a man, for ıstance, operate 10 or 12 mills—the rolls—used in the manufacture f tin plate approximately as cheap as he could a thousand?

Mr. KENNEDY. Yes; there is not much difference.

The CHAIRMAN. I will ask you to explain that to the committee. ıxplain how the plants must be integrated in the manufacture of the ɜmifinished product, in order to secure economy in production. I ill ask you to explain fully to the committee why it is not necessary ı these finishing mills, making nails, tin plate, and things of that ɔrt.

Mr. KENNEDY. In making tin plate you roll that plate on a mill, ıd if you want to make twice as much tin plate you put another mill ı the side, and if you want to make 10 times as much you put on 10 ills. You keep on adding, like looms in a woolen mill. In other ords, before you get to the bar there is a long sequence of operations, elting the ore, converting in open-hearth furnaces, casting it into .gots, and there is a big investment in mines, which is considered sential to start in with.

It is important for a man to start in with a large plant, but with a tin mill a man can start in with 6 hot mills and make his product as cheaply as if he had 60, proportionately.

The CHAIRMAN. What is the difference in the capital required to operate a mill turning out billets economically and the capital required to operate a mill turning out nails or tin plate or something of that kind?

Mr. REED. I think the problem is a little different between nails and tin plate.

The CHAIRMAN. Take tin plate first and then nails.

Mr. KENNEDY. If you take nails from the billets, then you have to have more. You have to have a hot mill, a drawing mill, and nail machines.

The CHAIRMAN. Take tin plate.

Mr. KENNEDY. Tin plate would be simpler than nails, if you take them from the billets.

The CHAIRMAN. What capital is required? Approximately what is the least amount of capital necessary to consume in order to start the operation of a mill in making tin plate?

Mr. KENNEDY. Oh, you could start that with a half million dollars if you could get your sheet bars.

The CHAIRMAN. What capital would be necessary to economically and competitively produce those plate bars?

Mr. KENNEDY. I should not think you ought to start in with less than fifteen or twenty million in order to stay in business.

The CHAIRMAN. About a nail mill; can they be operated economically without an integrated plant?

Mr. KENNEDY. If you start it with billets, they make considerable of a plant; more than the other I have spoken of. If you could buy your wire, you could start in the same way.

The CHAIRMAN. What do those nail machines cost?

Mr. KENNEDY. From three or four hundred dollars to a thousand.

Mr. REED. Do you know of any concern in the country that ever stayed alive very long buying its wire and making its nails?

Mr. KENNEDY. No; I do not think they could do it.

The CHAIRMAN. Could they do it if they could get their semifinished product at the same proportion? In other words, if the cost from the nails to the ore were equitably distributed and the man with the nail mill got his share of the profits, could he do it?

Mr. KENNEDY. Possibly he could; but the man who makes wire is very glad to put it into nails without much profit for the nail mill rather than shut down his wire mill. You could not expect him to stop his wire mill as long as he could market wire by turning it into nails.

The CHAIRMAN. What other finishing plants are there that could be operated at a reasonable cost without being integrated—the manufacture of tin plate, and what else?

Mr. KENNEDY. Ordinary sheet iron would come under the same conditions; bridge work would be similar.

The CHAIRMAN. Now, how about mills manufacturing merchant bar—bar mills? Are there a great many of them operated on a small capital?

Mr. KENNEDY. Yes; there are a good many of them.

Mr. YOUNG. What do these mills start with?

Mr. KENNEDY. Some start with old rails. They slice them up and make cheap bars for reinforcing concrete. Some start with billets, which they purchase from the steel companies.

The CHAIRMAN. You spoke this morning, Mr. Kennedy, of having made an estimate of the value of the tube plants prior to the formation of the National Tube Co. Mr. Carnegie, when he was on the stand, stated he could build a tube mill at Conneaut that would make tubes at $10 a ton cheaper than they were being made by the Federal Tube Co. or the National Tube Co.

Do you know anything about whether that could be done or not at the mills that Carnegie proposes to construct at Conneaut?

Mr. KENNEDY. He could undoubtedly have made them cheaper. I don't know whether he could make them $10 cheaper or not, but he could have made quite a material difference.

The CHAIRMAN. Why was that?

Mr. KENNEDY. He at that time had the cheapest steel from his mills; he also had a railroad to the lake, and proposed to put that plant at Conneaut. He would have taken his coal on the back haul, where it would be very cheap to haul. He had an extremely cheap proposition for assembling raw materials, and he would have had his blast furnaces, rolling mills, and tube mills altogether, and have had very much of an up-to-date plant. The tube mill at McKeesport has been modernized since, and they have possibly saved nearly that much themselves, but at that time he could have made a very handsome difference in cost, I have no doubt.

The CHAIRMAN. You made a careful study of these plants. How did the proposed plant Carnegie intended to build, a modern, up-to-date plant, compare in efficiency with the tube mills then in existence, and which were all combined in the National Tube Co.?

Mr. KENNEDY. It would naturally be supposed to be better than the average of them. Of course, it was never built. It never got further than some plans being made.

Mr. REED. I do not think that all of the tube plants then in existence were combined in the National.

Mr. KENNEDY. By the way, I want to make one little correction. I estimated this morning the amount that went into the combine at 90 per cent. I have since that time thought about the Reading plant and possibly one or two others I omitted, and my estimate was probably large. Possibly 75 per cent or 80 per cent is more nearly correct.

The CHAIRMAN. Why, in your opinion, did Carnegie select, as he said he did, a tube mill at that time? Why did he threaten to build a tube mill and not to build a wire mill, a blast furnace, or something of that kind at Conneaut? He had the same facility for assembling raw materials. Why did he select a tube mill?

Mr. KENNEDY. I do not know. I would hate to guess at the working of his mind. It is subtle.

The CHAIRMAN. What particular advantage would come to him from the selection or the threatening to build a tube mill rather than another kind? What effect would the threat to build a tube mill naturally have upon those who were tentatively considering the purchase of the Carnegie property? What tactical advantage was there in threatening to build a tube mill at that point?

Mr. KENNEDY. Well, it would have undoubtedly caused such persons to get very busy and try to shape their affairs up if they had a notion of buying.

The CHAIRMAN. Was the tube end of it a weak joint in their armor, anyway?

Mr. KENNEDY. It was probably their most profitable product, one that they would hate to see touched more than any other part of their manufacture.

Mr. YOUNG. Also one out of which Carnegie could make the more profit?

Mr. KENNEDY. Yes. Carnegie had no tube mill. He had the other things; he had rail mills galore, plate mills; and the tube mill was the thing he did not have and the things they did have and something they would not want him to have particularly.

The CHAIRMAN. Do you know anything about his plans at that time for constructing a railroad—building a new railroad?

Mr. KENNEDY. Nothing more than that parties were out running lines through the fields.

The CHAIRMAN. Do you know whether he had a corps of engineers at Pittsburgh working on it?

Mr. KENNEDY. I understood that men were out working on some lines of railroad. I don't know just where. And also that plans were being drawn for a tube mill. I never saw them.

The CHAIRMAN. Mr. Kennedy, have you made a study—and then I will be through with you—of this profit-sharing plan of the Steel Corporation? Do you know anything about it?

Mr. KENNEDY. Not what would be called a study. I have noticed it with a good deal of interest.

The CHAIRMAN. What do you think of that plan?

Mr. YOUNG. Is this an expert opinion also?

Mr. REED. He has one in India, perhaps.

Mr. KENNEDY. He has not. I think it is a good move. When I was with Mr. Carnegie he had a great many people who shared in the profits, and it made them interested in their work. I have no doubt that this does. Where a man's financial interests are he will work harder than if he is simply on a salary.

The CHAIRMAN. I mean this plan of the Steel Corporation of selling stock to employees. Have you examined that?

Mr. KENNEDY. Yes; I know, in a general way, about what that is. That gets them interested in it and makes them part owners. I think it causes them to try and preserve the property and run it to good advantage, and all that, more than if they simply were paid wages and did not have a chance to become identified with it.

Mr. BARTLETT. You testified that in your opinion it is not good public policy, because it gives the industrial corporation undue advantage over its competitors to own a transportation company, on which they haul their own products to their mills over others who have not such like transportation facilities. What do you think of the proposition of railroads owning an interest in industrial or mining or manufacturing concerns on their lines, the company interested in them hauling the freight over their own line, producing and manufacturing the freight which they haul, in competition with others engaged in like industrial occupations?

Mr. KENNEDY. You mean from the standpoint of public policy?

Mr. BARTLETT. Exactly.

Mr. KENNEDY. Oh, I think that is not a good thing. It would be better if we did not have it.

Mr. Bartlett. For instance, the Pennsylvania Railroad owns a majority of the stock in some things that are called independent steel manufactures.

Mr. Kennedy. The Cambria & Pennsylvania Steel.

Mr. Bartlett. The Cambria & Pennsylvania Steel. The reason given by the last witness, Mr. Wood, who was vice president of the Pennsylvania Co., was that they did it more to protect themselves in some way. That policy, then, you do not think is a good one for the public; it may be good for the railroads.

Mr. Kennedy. I doubt whether it is good for either in the long run, and certainly not for the public. A railroad, being a common carrier and a public utility, should treat everybody alike, and there are at least times when there would be temptation to treat them not exactly alike if they are interested in one, although I think it is better for a railroad to be interested in a manufacturing business than it is for an official of the railroad personally to be interested in the manufacturing business to a very large extent.

Mr. Bartlett. Take a railroad where very often in developing a new country it takes stock in a cotton mill, for instance, or any other kind of a plant, for the purpose, primarily, of building up the particular locality or helping the locality obtain the factory. That sometimes occurs.

But in the case referred to, the ownership and control of the stock in these steel corporations was acquired not, as I understand, to aid in the erection of the plants or to aid the people in building up the community, but was done for the purpose of putting the railroad company in a position where it could protect itself in the prices of products which were manufactured in these plants in which it owned an interest.

Have you or not given any thought to the question of the control of the business of the big corporations by the Government?

Mr. Kennedy. Oh, yes.

Mr. Bartlett. You have?

Mr. Kennedy. There is no one who has not done that—I hope not.

Mr. Bartlett. Have you any plan to suggest to the committee by which the present law on the subject should be amended or by which the evils complained of most by the public and the hardships complained of by the corporations in complying with the law could be remedied?

Mr. Kennedy. I think, as far as public utilities are concerned, every manufacturing company should be put on an exact equality, if that can be done.

Mr. Bartlett. A manufacturing company is not regarded as a public utility.

Mr. Kennedy. No; but as far as their dealings with public utilities are concerned, I think every manufacturing company should be on an exact equality with others, which I do not believe they can be. If manufacturing corporations own railroads, I think that is a matter for the Government to exercise its skill on. Take, for example, the Reading Railroad owns coal, and other people own coal up there. The other people can do nothing, of course, in competition. They simply are at the mercy of the people who own the road.

Mr. Young. Was not that road built in the first place because the men building it owned the coal and built to get the coal?

Mr. KENNEDY. It might be, but still that does not make it right.

Mr. YOUNG. Was not that the fact?

Mr. KENNEDY. Possibly so. I would not know about that. But if it were, it was built under charter; it was a common carrier, and should come under the same rules as the Pennsylvania or any other railroad.

Mr. YOUNG. Do you think there was anybody else at that time, who did not own that coal who would have been willing to build the road? You know something about the history of it, don't you?

Mr. KENNEDY. Yes; a little.

Mr. BARTLETT. The charter granted to them by Pennsylvania authorized them to own the coal mines and operate them.

Mr. REED. That is correct.

Mr. BARTLETT. In other words, the right to produce coal was granted to them.

Mr. KENNEDY. In that case the rates should be most zealously scanned, with power to act.

Mr. BARTLETT. That is true. Congress has gone to the extent of endeavoring to prohibit the ownership of independent manufacturing concerns——

Mr. KENNEDY (interposing). If the rates on that road could be put at what was exactly equitable, then that objection would not be so strong, but in case of a railroad which practically buys the coal from other people and markets it, it controls the price, and it is not equitable.

Mr. BARTLETT. Do you believe it is necessary to have a combination, an understanding, or a gentleman's agreement, or anything of that sort between these large corporations, doing the great business of the country, in order to keep stable prices of the product.

Mr. KENNEDY. That is a pretty hard question to answer. I have seen such demoralizations that I would have a good deal of hesitation in expressing an opinion on that. This condition I speak of, when I was around these tube mills, was almost pathetic. I do not know. I think a good deal of that came from an examination——

Mr. BARTLETT (interposing). Under the present law any unreasonable restraint of trade, by agreement, by any person who is engaged in interstate commerce, is inhibited by the statute. Now, do you think that that law should be changed so as to permit combinations or that the Government should take not only supervision but control, so as to regulate the prices of the product of corporations or people engaged in these large businesses?

Mr. KENNEDY. I should hesitate about recommending that very much. I think the Government should be very careful to put all producers, as far as the Government can, on a level, especially in regard to transportation. Most of the abuses in this country have been due to transportation.

Mr. BARTLETT. As far as transportation matters are concerned, I do not apprehend that there is any difficulty finally of regulating that. Whether it is difficult to regulate the other matter, of railroads owning manufacturing concerns, that is a question about which there is trouble, I presume.

What I was trying to get at was whether you had any suggestions to make as to what could be further done to enable these people, who are engaged in these large businesses in the country, to carry on that business in a way that they are now inhibited by a strict construction of the statute from doing, either by lessening the rigor of the statute or by the Government taking further control and regulation of business.

Mr. KENNEDY. That is almost too big a question, I am afraid, for me. But I feel that would not be necessary if equality of opportunity absolutely could be granted to everyone so far as public utilities are concerned. I think some of those things will correct themselves. But if one company is so fortified by public utilities that they have $1 or $2 benefit of anybody else, that company would be dominant.

Mr. BARTLETT. You, then, think that most of the evils that are complained of could be remedied more by attention being given to the correction of evils that exist in transportation than the establishment of public-utilities companies?

Mr. KENNEDY. I think so. If you go back to the history of the Standard Oil Co. you will find all their abuses were based on the unfair advantage of their public utilities. I think you will find anywhere that nine-tenths of the trouble comes through that. If you correct that the other things will largely correct themselves. At least it is worth thinking about and trying.

Mr. BARTLETT. You think, then, that with the proper regulation of rates—I will put it that way—and the enforcement of the law, and the enactment of new law which would prohibit any industrial company or organization from having benefits in the matter of the use of the public utilities that that is about all that the Government ought to do in the way of regulating the business of these public-utility corporations and of the industrial corporations?

Mr. KENNEDY. I do not know whether it is all they ought to do, but I think that is the proper thing, and the thing that should have attention first.

The CHAIRMAN. As I understand you, you would divorce absolutely the control and operation of public utilities from industrial concerns, if it could be done by law?

Mr. KENNEDY. Unless it was possible in some other way to guarantee absolute equality.

Mr. YOUNG. Mr. Chairman, it is half-past 5, and I suggest that I have a great many questions I want to ask Mr. Kennedy, and that it is too late for us to go on.

The CHAIRMAN. Very well. If that is the case we will adjourn.

Mr. REED. Mr. Chairman, I have some information to be given to the committee which you have asked for.

The CHAIRMAN. All right, Mr. Reed.

Mr. REED. I am advised that Mr. Filbert, comptroller of the Steel Corporation, sent to the chairman a statement showing 37,000,000 tons of ore under the Hill lease had been uncovered by the Steel Corporation through it stripping operations, and just at this point I want to caution the committee against a misunderstanding of those figures. Of course, with the open-pit method of mining, it is necessary to uncover a great deal more ore than can be made available.

The CHAIRMAN. I understand.

Mr. REED. That is to say, while 37,000,000 tons have been uncovered and have been shown to be there in the ground, not more than 27,000,000 tons of that can be dug out by the open-pit method of mining, so those figures ought to be read with that understanding.

The CHAIRMAN. I was going to say, Mr. Reed, that I appreciate Mr. Filbert's promptness in sending that report, and also the report of the number of employees of the Steel Corporation, with the amount received by them in excess of $2,000.

Have you that document with reference to the amounts, uncovered—the tabulated statement of Mr. Filbert?

Mr. REED. No; that he sent to you direct.

The CHAIRMAN. In some way it has been mislaid in the office. I will ask you to request him to send me a carbon copy of the former communication.

Mr. REED. I will get a copy of that; yes, sir.

You also asked for information as to the cost of constructing the ore-washing plants at Coleraine, Minn., and your request implied that that was built on property which we took under the Hill lease; but that, Mr. Chairman, is not the fact. It is built on property which

that that was built on property which we took under the Hill lease;

The cost of the construction of that plant was $1,500,218. I have the formal statement made by Mr. Filbert.

The CHAIRMAN. Is that plant available now for practical purposes?

Mr. REED. Oh, yes. It was built not only to wash the Hill ores, but also other ores that require concentrating, and will continue to be used after the surrender of the Hill lease.

The CHAIRMAN. I will put all those statements in the record together.

Mr. REED. I have two or three others. Perhaps these had all better go in at the close of to-day's hearing.

The CHAIRMAN. Yes.

Mr. REED. In addition to that you have asked us for a statement of the ore holdings which were acquired through the acquisition of the Union Steel Co., the Sharon Steel Co., and the Clairton Steel Co., and I have that statement here.

Also, you have asked for a statement of the manufacturing properties acquired by the Steel Corporation since April 1, 1901, and I have that statement here. It shows the cost of acquisition of each of these properties.

The CHAIRMAN. Those statements may all be inserted in the record.

Thereupon the committee adjourned until to-morrow, Thursday, March 28, 1912, at 10 o'clock a. m.

The statements referred to above are as follows:

STEEL EXPORTED AT LOWER PRICES—FIGURES IN NEARLY ALL CASES MUCH BELOW HOME RATES—CORPORATION'S STATEMENT TO STANLEY INVESTIGATING COMMITTEE—SOME HEAVY CONCESSIONS MADE TO FOREIGN BUYERS—KEEPING DOMESTIC MILLS EMPLOYED ON TONNAGE SHIPPED ABROAD—SPREAD MOST PRONOUNCED IN TIN PLATE—WIRE PRODUCTS EXPORTED AT HIGHER PRICES, HOWEVER.

The United States Steel Corporation has furnished the Stanley steel investigating committee with a statement showing in detail the amount of its export tonnage and the prices received for it during the last five years. The statement is appended to the record of the testimony, and it enables the steel trade to learn officially for the first time just how much cheaper the Steel Corporation is selling abroad than at home. No comparison with domestic prices is made in the statement, but the official statistics of the American Iron & Steel Association make such a comparison possible.

It has been pretty well known in steel circles that the Steel Corporation's export prices have been almost uniformly lower than the domestic prices, but some of the concessions made to foreign consumers shown in the comparison are surprisingly large. In 1906, for instance, there was a spread between the average domestic f. o. b. price of structural shapes and the corporation's f. o. b. export price of nearly $9. In 1908 there was a spread in the case of plates of $7, and in 1909 rails were sold abroad on an average of $4 a ton less than at home. The biggest difference is in tin plates, in which the Steel Corporation has been for years in sharp competition with the Welsh makers. There was in 1906 a difference of nearly $19 a ton, and in 1910 there was a difference of about $12.50 a ton. A possible explanation of this is that the duty on tin plates is very high, now amounting to 1.2 cents per pound, or $26.88 per gross ton, as compared with $3.92 for steel rails.

On the other hand, the figures show that the corporation has received more for its wire products exported than the domestic price. A great deal of wire goes to South America and the Far East in competition with German wire makers, who are the corporation's chief rivals. Some months ago foreign trade periodicals reported that the "agreement" between American and German manufacturers in regard to prices in the export wire trade had been violated by the Americans. Whether if such an agreement ever existed, it has had an influence in maintaining the price of wire in neutral territory can only be surmised, but it would appear, at any rate, that the prices are higher than they are in this country. The duty on wire rods and wire nails, incidentally, is $8.96 per gross ton.

The differences referred to above are shown in the following tables, which compare the average mill prices f. o. b. of some of the principal products exported by the United States Steel Corporation since 1906 with the average f. o. b. Pennsylvania mill, domestic prices, as reported by the American Iron & Steel Association.

	Average domestic price per gross ton.	Average United States steel export price per gross ton.	Difference per gross ton.[1]
Rails:			
1906	$28.00	$24.42	−$3.58
1907	28.00	28.29	+ .29
1908	28.00	25.80	− 2.20
1909	28.00	23.94	− 4.06
1910	28.00	24.16	− 3.84
Plates:			
1906	35.84	29.84	− 6.00
1907	38.08	33.17	− 4.91
1908	36.84	29.84	− 7.00
1909	31.70	27.50	− 4.20
1910	32.97	29.04	− 3.93
Structural shapes:			
1906	38.48	29.58	− 8.90
1907	38.48	32.48	− 6.00
1908	36.74	29.50	− 7.34
1909	31.58	27.37	− 4.21
1910	32.92	28.42	− 4.50
Wire nails:[2]			
1906	37.20	39.10	+ 1.90
1907	40.20	45.46	+ 5.26
1908	39.80	40.26	+ .46
1909	36.40	37.92	+ 1.52
1910	35.00	37.37	+ 2.37
Tin plates:[3]			
1906	3.69	2.85	−18.91
1907	3.90	3.40	−11.20
1908	3.70	2.98	−16.12
1909	3.50	2.85	−14.56
1910	3.60	3.04	−12.54

[1] −=decrease; +=increase.

[2] Per net ton.

[3] Per 100-pound box.

The United States Steel Corporation's export tonnage in 1910 was the largest on record, amounting to 1,216,057 tons, and the value, as calculated from the corporation's statement, was over $41,500,000. The following table, for the year

1910 only, shows the export shipments and the total f. o. b. mill price received by the Steel Corporation, with the exception of 46,096 tons of miscellaneous products for which prices were not given:

	Tons.	Total price received.
Steel rails.........gross tons..	271,233	$6,688,606
Billets, blooms, slabs, sheet, bars, and skelp.........do....	92,043	2,040,593
Plates.........do....	105,875	3,074,610
Structural shapes.........do....	93,325	2,652,268
Merchant bars, bands, etc.........do....	88,966	2,707,235
Hoops and cotton ties.........do....	13,344	457,432
Spliced bars, rail joints, etc.........do....	16,046	589,691
Wrought pipe.........do....	109,203	5,674,997
Tin plate.........[1] base boxes..	393,012	1,194,639
Sheets.........gross tons..	116,622	6,706,931
Rods.........do....	23,029	669,914
Coarse wire.........net tons..	18,667	617,504
Wire nails and staples.........do....	57,178	2,136,642
Wire, tinned and coated.........do....	62,466	2,443,045
Wire, barbed and galvanized, twisted.........do....	78,869	3,643,537
Wire fence and netting.........do....	5,551	290,206
Total.........	1,169,961	41,586,950

[1] Included in total gross tons on basic of 100 pounds per base box.

Owing to the fact that prices of steel have fallen this year the world over to lower levels than during 1910 it is obvious that the United States Steel Corporation must be doing its export business this year at exceeding low prices. The corporation's export tonnage thus far this year has been at the rate of over 2,000,000 tons annually, far exceeding the exports last year. The tonnage thus far taken has represented between 20 and 25 per cent of the corporation's total production, and has enabled it to keep its mills running at a higher per cent of capacity during the dull period than it otherwise could have done.

United States Steel Corporation,
Office of the Comptroller,
Empire Building, New York, March 19, 1912.

Hon. A. O. Stanley,
Chairman Special Committee to Investigate Violations of the Antitrust Act of 1890, and Other Acts,
Washington, D. C.

Dear Sir: At the request of our Mr. Bolling, I send you copy of letter addressed you on the 16th instant in reference to employees receiving salaries or wages in excess of $2,000 per annum. Mr. Bolling also suggests that we give you the total number of employees at January 1, 1912. The number was 192,237.

Yours, truly,

W. J. Filbert, *Comptroller.*

March 16, 1912.

Hon. A. O. Stanley,
Chairman Special Committee to Investigate Violations of the Antitrust Act of 1890, and Other Acts,
Washington, D. C.

Dear Sir: In accordance with request received through Mr. D. A. Reed, of our counsel, we give you the following information:

Number of employees receiving annual salary or wages of more than $2,000 each______	4,106
Annual aggregate salaries and wages of foregoing employees_____	$13,534,213

The above figures are based on conditions existing at January 1, 1912.

Yours, truly,

——— ———, *Comptroller.*

Statement of ore holdings as indicated below.

Name of property.	Acquired in—	Estimated tonnage.	Fee or lease.
Sharon mine	Union Steel purchase, being the ore property of Sharon Steel Co., which company was merged with Union Steel Co., just prior to United States Steel acquirement of Union Steel Co.—		
	Non-Bessemer	14,992,788	Fee.
	Silicious	1,524,351	Do.
Champion	Non-Bessemer	2,850,000	Do.
Little and Prindle	Clairton Steel Co.—		
	Non-Bessemer	2,652,986	Lease.
	Silicious	165,233	Do.
St. Clair	One-half of fee interest in—		
	Bessemer	153,189	
	Non-Bessemer	2,436,927	
	Silicious	340,540	

NOTE.—The Steel Corporation prior to acquiring through Clairton Steel Co. one-half of the fee interest in this mine, had a lease of the remaining one-half the fee of which was owned by an individual.

Concentrating (ore washing) plant at Coleraine, Minn.

Cost to construct	$1,500,218

This plant was erected to wash ores in the Coleraine district requiring such treatment irrespective of whether such ores came from the Hill lease properties or other properties owned by United States Steel Corporation's subsidiaries.

The foregoing plant is not located on property under the Hill lease, but on fee lands owned by the corporation's subsidiaries. Nor are permanent improvements (other than shafts) installed in connection with the Hill lease properties located on the leased property itself.

Manufacturing properties acquired by United States Steel Corporation or its subsidiary companies by purchase since Apr. 1, 1901.

Owning company.	Location of plants.	Cost of fixed property.	Remarks.
Union Steel Co	**Donora, Pa**	**(1)**	**Plants have been continued and are now in operation.**
Sharon Steel Co	**South Sharon, Pa**	**(1)**	**Plants were much enlarged after acquirement by United States Steel.**
Clairton Steel Co	**Clairton, Pa**	**(2)**	**Plant has been continued and is now in operation. It has been materially enlarged since acquired.**
Troy Steel Products Co	**Breaker Island, Troy, N. Y.**	**$1,100,000**	**Plant has not been abandoned, but has not been operated since acquired. Furnaces have been kept in condition for operation, but uncertainty of conditions relating to ore and fuel supply, also demand for product, has not warranted establishing a permanent operating organization and starting furnaces. The blooming mill was removed to and installed at South Chicago plant.**
Griswold Wire Co	Braddock, Pa	73,677	**Plant has been continued and is still in operation. Plant has been enlarged since acquirement.**
Trenton Iron Co	Trenton, N. J	246,973	Plant has been continued and is now in operation, and substantial additions have been made thereto. See Note A.

[1] See page 19 of United States Steel Corporation Report for 1902.

[2] See page 18 of United States Steel Corporation Annual Report for 1904.

Manufacturing properties acquired by United States Steel Corporation or its subsidiary companies by purchase since Apr. 1, 1901—Continued.

Owning company.	Location of plants.	Cost of fixed property.	Remarks.
Morgantown Tin Plate Co....	Morgantown, W. Va..	120,115	Plant has been continued and is now in operation. Plant has been materially enlarged since acquired. See Note B.
National Steel & Wire Co.....	New Haven, Conn....	636,000	Plant has been continued and is still in operation. It has been much enlarged since acquired. See Note C.
De Kalb Fence Co............	Dekalb, Ill............	296,755	Plant has been continued and is still in operation. See Note D.
Anthony Fence Co...........	Tecumseh, Mich......	200,000	Plant has been continued and is still in operation. See Note E.
Risdon Iron and Locomotive Works.	San Francisco, Cal....	1,261,683	See Note F.
Baltimore Bridge Co..........	Baltimore, Md........	261,050	Plant has been continued and is still in operation. See Note G.

NOTES. A. The plant of the Trenton Iron Co. was owned by the heirs of the late Abram Hewitt, of New York. They were desirous of getting out of business entirely and the property was purchased by the American Steel and Wire Co. only after the owners had repeatedly solicited the corporation to purchase the same.

B. The Morgantown plant of the Morgantown Tin Plate Co. was at time of purchase a small property, had been idle for a long time, and the company was bankrupt. It was purchased by the American Sheet and Tin Plate Co. in the liquidation of the affairs of the old company. Immediately after the acquirement it was materially enlarged and modernized.

C. The New Haven plant was purchased at receiver's sale, the old company having for several years been in receiver's hands and the plant idle; the property was put up at auction for sale. The plant was materially enlarged after purchase by present owners.

D, E. These plants at De Kalb and Tecumseh were producers of wire netting of types not made by American Steel & Wire Co. and were purchased by latter for purpose of extending its business in those lines. Owners of both plants were desirous of retiring from business and were offering same for sale.

F. The Risdon plant, San Francisco, was not a producer of steel, but operated in the building and repairing of vessels and engines. Its owners had for some years been desirous of selling out and retiring, and, in fact, were liquidating the business at time plant was purchased by the corporation. The latter acquired it for use of warehousing purposes, the location, buildings, and much of the facilities being specially adapted therefor. The plant is now being employed for the purpose stated.

G. The Baltimore plant is a small one; it was owned by Minor C. Keith, of New York, and was operated in fabricating lighter classes of steel material, principally for export. Carnegie Steel Co. was looking for a site for a warehouse in Baltimore, and Mr. Keith learning of this and being desirous of getting out of business, offered the plant. Carnegie Steel Co., in addition to carrying on the fabricating work formerly done at the plant, will also utilize it for warehouse purposes, for which the plant is well adapted and located.

AVERAGE YEARLY PRICES OF IRON AND STEEL FROM 1896 TO 1911.

The following table gives the average yearly prices of leading articles of iron and steel, tin plates, and wire nails from 1896 to 1911. These prices are per ton of 2,240 pounds, except for bar iron, bar steel, beams and channels, tin plates, and cut and wire nails, which are quoted by the 100 pounds, 100-pound boxes and 100-pound kegs, respectively:

Articles.	1896	1897	1898	1899	1900	1901	1902	1903
Old iron T rails at Philadelphia.......	$14.17	$12.49	$12.39	$20.36	$19.51	$19.32	$23.83	$21.17
No. 1 foundry pig iron at Philadelphia.	12.95	12.10	11.66	19.36	19.98	15.87	22.19	19.92
Gray forge pig iron at Philadelphia....	11.09	10.48	10.23	16.60	16.49	14.08	19.20	17.13
Gray forge pig iron at Pittsburgh......	10.39	9.03	9.18	16.72	16.90	14.20	19.49	17.52
Bessemer pig iron at Pittsburgh.......	12.14	10.13	10.33	19.03	19.49	15.93	20.67	18.98
Steel rails, at mills, in Pennsylvania [2].	28.00	18.75	17.62	28.12	32.29	27.33	28.00	28.00
Steel billets, at mills, at Pittsburgh [2].	18.83	15.08	15.31	31.12	25.06	24.13	30.57	27.91
Steel ship plates at Pittsburgh.......	....	....	....	....	....	[1] 34.87	35.84	35.84
Beams and channels at Pittsburgh...	1.49	1.24	1.17	1.83	1.91	1.58	1.60	1.60
Best bar iron, from store, at Philadelphia...........................	1.40	1.31	1.28	2.07	1.96	1.84	2.13	2.00
Best bar iron, at mills, at Pittsburgh..	1.21	1.10	1.07	1.95	2.15	1.80	1.94	1.77
Bar steel, at mills, at Pittsburgh......	1.13	.97	.98	1 93	1.63	1.47	1.67	1.56
Cut nails, from store, at Philadelphia.	2.36	1.47	1.31	2.21	2.46	2.29	2.29	2.36
Wire nails, base price, at Chicago.....	2.54	1.46	1.45	2.60	2.76	2.41	2.15	2.13
Tin plates, at mills, in Pennsylvania.	....	....	....	[1] 4.06	4.47	4.00	3.93	3.74

[1] We have no quotations prior to this year.

[2] Prices are for Bessemer steel rails and Bessemer steel billets. Prices of open-hearth steel rails and open-hearth steel billets are somewhat higher.

Articles.	1904	1905	1906	1907	1908	1909	1910	1911
Old iron T rails at Philadelphia	$16.22	$22.08	$23.03	$23.88	$18.61	$19.42	$19.09	$16.90
No. 1 foundry pig iron at Philadelphia	15.57	17.88	20.98	23.89	17.70	17.81	17.36	15.71
No. 2 foundry pig iron at Philadelphia	....	....	[1] 20.19	23.14	17.20	17.31	16.86	15.21
No. 2 foundry pig iron at Birmingham	[1] 10.20	12.77	15.51	20.03	12.25	12.75	11.90	10.41
Low-phosphorus pig iron at Philadelphia	....	[1] 21.01	25.24	27.24	21.94	21.05	22.72	20.56
Gray forge pig iron at Philadelphia	13.67	15.58	17.79	21.06	15.72	16.13	15.72	14.43
Gray forge pig iron at Pittsburgh	12.89	15.62	18.19	21.52	15.23	15.55	15.24	13.97
Bessemer pig iron at Pittsburgh	13.76	16.36	19.54	22.84	17.07	17.41	17.19	15.71
Basic pig iron at Philadelphia	....	[1] 16.50	18.91	22.17	16.25	16.80	16.35	14.63
Basic pig iron at Pittsburgh	....	[1] 16.33	19.13	21.98	16.17	16.40	15.66	13.98
Steel rails, at mills, in Pennsylvania [2]	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
Steel billets, at mills, at Pittsburgh [2]	22.18	24.03	27.45	29.25	26.31	24.62	25.38	21.46
Steel ship plates at Pittsburgh	34.52	35.61	35.84	38.08	36.84	31.70	32.97	29.25
Beams and channels at Pittsburgh	1.54	1.62	1.70	1.70	1.64	1.41	1.47	1.31
Best bar iron, from store, at Philadelphia	1.72	1.92	1.98	2.11	1.70	1.76	1.85	1.64
Best bar iron, at mills, at Pittsburgh	1.48	1.87	1.93	1.94	1.60	1.62	1.65	1.41
Bar steel, at mills, at Pittsburgh	1.32	1.58	1.58	1.60	1.48	1.32	1.44	1.26
Cut nails, from store, at Philadelphia	2.01	2.00	2.13	2.36	2.20	2.05	2.10	2.02
Wire nails, base price, at Chicago	1.96	1.93	1.98	2.18	2.17	2.00	1.96	1.89
Tin plates, at mills, in Pennsylvania	3.41	3.50	3.69	3.90	3.70	3.50	3.60	3.62

[1] We have no quotations prior to this year.

[2] Prices are for Bessemer steel rails and Bessemer steel billets. Prices of open-hearth steel rails and open-hearth steel billets are somewhat higher.

Pig iron, steel rails, and steel billets are quoted in gross tons of 2,240 pounds. Steel ship plates, beams, and channels, bar iron, and bar steel in lots of 100 pounds. Cut and wire nails in kegs of 100 pounds. Tin plates in boxes of 100 pounds.

THE AMERICAN IRON AND STEEL ASSOCIATION
JAMES M. SWANK, *General Manager.*

PHILADELPHIA, *March 23, 1912.*

No. 58

UNITED STATES STEEL CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

THURSDAY, MARCH 28, 1912

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

UNITED STATES STEEL CORPORATION.

Committee on Investigation of the
United States Steel Corporation,
House of Representatives,
Washington, D. C., Thursday, March 28, 1912.

The committee met at 10.30 o'clock a. m., Hon. Augustus O. Stanley (chairman) presiding.

STATEMENT OF JULIAN KENNEDY—Continued.

Mr. Young. Mr. Kennedy, when did you first engage in an occupation that brought you in touch with the iron and steel business?

Mr. Kennedy. About 1870.

Mr. Young. What was that occupation?

Mr. Kennedy. I was working as an assistant in a drawing office, designing blast furnaces.

Mr. Young. As a mechanical engineer?

Mr. Kennedy. Well, as a boy, as a cub.

Mr. Young. But in the mechanical engineering department?

Mr. Kennedy. Oh, I should say it was about 1891, when I commenced to devote all my attention practically to construction.

Mr. Young. What were you doing from 1870 to 1891?

Mr. Kennedy. I worked for about two or three years for the Strothers Iron Co., at Strothers, Ohio.

Mr. Young. In what capacity?

Mr. Kennedy. In various capacities, as a boy in the drawing office doing various things; I was running engines in the plant for about two years; then in the office for a while. Then I went to college and was there until 1886, and then went with the Bar Hill Iron & Coal Co. for a while.

Mr. Young. What were you doing for that company?

Mr. Kennedy. Superintendent of blast furnaces. Then I went with the Carnegie Steel Co. at Braddock, as superintendent of blast furnaces.

Mr. Young. At what time?

Mr. Kennedy. I went there in 1879 and was there until about 1883, as I remember it.

Mr. Young. As superintendent of blast furnaces at Braddock?

Mr. Kennedy. Yes, in Braddock. Then for about two years as superintendent of the Lucy Furnaces at Pittsburgh. In 1885 I went to Homestead as superintendent of the Homestead Steel Works, Carnegie, Phipps & Co., and was there until 1888. Then I was superintendent of the Latrobe Steel Works. Since that time I have been engaged practically entirely in construction and designing.

Mr. Young. That is, since 1888 or 1891?

Mr. Kennedy. Well, in 1891 I opened a general office. I gave all of my time to the Latrobe Steel Co. until 1890 or 1891, and then opened a general office at Pittsburgh as a mechanical engineer.

Mr. Young. While you were with the Latrobe Steel Co. were you there as mechanical engineer?

Mr. Kennedy. Yes.

Mr. Young. So that since 1888 your business has been that of a mechanical engineer?

Mr. Kennedy. Yes.

Mr. Young. And the constructing of steel plants?

Mr. Kennedy. Yes.

Mr. Young. During that time have you had anything to do with the practical operation of plants?

Mr. Kennedy. No; not as superintendent or anything of that kind.

Mr. Young. So, so far as your actual experience goes in operation, it had ended in about 1888?

Mr. Kennedy. Yes.

Mr. Young. Have you ever had anything to do with the marketing of steel products?

Mr. Kennedy. No.

Mr. Young. Have you ever had anything to do with the transportation of ores and coal, either as a shipper or from the railroad side?

Mr. Kennedy. Yes; as a shipper I have had some.

Mr. Young. What was that experience?

Mr. Kennedy. I have been president of a coke company for several years.

Mr. Young. That is, of late years?

Mr. Kennedy. Yes.

Mr. Young. And are still?

Mr. Kennedy. And am still.

Mr. Young. Where are your coke works located?

Mr. Kennedy. They are located in the lower Connellsville region, what is known as the Klondike region.

Mr. Young. Where do you ship to?

Mr. Kennedy. We ship all over the country.

Mr. Young. Where does most of it go?

Mr. Kennedy. About two-fifths of our product goes to the Youngstown district. As a general rule we have one customer who has been taking a portion of our coke right along up there.

Mr. Young. So that you are quite vitally interested in the question of the transportation of coke?

Mr. Kennedy. Yes.

Mr. Young. You said something yesterday, I think, about having been connected with a railroad?

Mr. Kennedy. I was connected with a railroad out West. It did not haul iron and steel products. It was an interurban road and hauled agricultural products and passengers.

Mr. Young. Where was it?

Mr. Kennedy. Boise City, Idaho.

Mr. Young. To what other towns did it run?

Mr. Kennedy. From there to Caldwell.

Mr. Young. What distance?

Mr. Kennedy. Thirty-nine miles.

Mr. Young. Is that a steam road?

Mr. Kennedy. No; it is an electric road.

Mr. Young. It is an electric road?

Mr. Kennedy. Yes.

Mr. Young. Did you ever have any experience with a steam railroad?

Mr. Kennedy. No; not in operating.

Mr. Bartlett. You mean experience in operating?

Mr. Young. Yes. He said he had been a shipper of coke. Do you ship any coal?

Mr. Kennedy. No.

Mr. Young. You manufacture coke and ship coke?

Mr. Kennedy. Yes.

Mr. Young. You said something about the Union Steel Co. When was that company organized, if you know?

Mr. Kennedy. I don't remember the date.

Mr. Reed. About 1900.

Mr. Kennedy. I presume somewhere about there; I don't remember.

Mr. Young. Was it shortly before the organization of the Steel Corporation—that is, within a few years; two or three years?

Mr. Kennedy. I do not remember the exact date of the organization of the Steel Corporation.

Mr. Young. April, 1901.

Mr. Kennedy. Well, if the other was organized in 1900 and the Steel Corporation in 1901, it would be comparatively shortly. I don't remember either date. I think it is all given here in the record.

Mr. Young. When were the works built?

Mr. Kennedy. I can not tell exactly when the works were built. I was connected with the building and furnishing of plants for a portion of the works. They had a wire works, some mills, and that sort of thing that were built first, and then a little later on they built some blast furnaces and open hearths. My recollection is that those were nearly completed when they were taken over by the corporation, but just when it was I do not remember. I think that also appears in the record.

Mr. Young. Had they produced any pig iron in their blast furnaces before they were taken over?

Mr. Kennedy. No; I think they were not quite ready to run, as I remember it. There was still some little construction work to finish up.

Mr. Young. So there has been no experience to judge what their profits would be in the blast furnaces at the time they were taken over?

Mr. Kennedy. No; I think not.

The Chairman. That is the Union you are talking about?

Mr. Young. Yes. Do you know what the capacity of the plant was that was being built?

Mr. Kennedy. Why, I know in a general way. The capacity was about 1,000 tons of pig iron; that portion with which I was connected.

Mr. Young. A day?

Mr. KENNEDY. A day; yes.

Mr. YOUNG. Was that the entire capacity, or did the other furnaces mill it?

Mr. KENNEDY. No; I think that was the entire capacity at that plant. I do not know of any other furnaces they had.

Mr. REED. Mr. Kennedy means, I think, the Union Steel Co.'s plant at Donora, not the Sharon plant.

Mr. KENNEDY. I am not speaking of the Sharon plant.

Mr. YOUNG. The Sharon occurred a little later.

Mr. REED. By merger. But when he mentions the Union Steel plant he means the Donora plant.

Mr. YOUNG. I think you said you knew nothing about the value of their ores?

Mr. KENNEDY. No; I have never seen their ore mines, or, at least not to examine them carefully. I have been past them on a train.

Mr. YOUNG. Have you ever had any experience in the mining of iron ore?

Mr. KENNEDY. No.

Mr. YOUNG. Have you ever dealt in iron mines, bought them, sold them, or traded in them?

Mr. KENNEDY. I did have interests in some a good while ago, but I did not operate them.

Mr. YOUNG. How long ago?

Mr. KENNEDY. I don't remember how long ago.

Mr. YOUNG. Do you still hold those interests?

Mr. KENNEDY. No, sir.

Mr. YOUNG. Did you ever have any interest in the Lake Superior district?

Mr. KENNEDY. No; except through holding little bits of stock of companies that had.

Mr. YOUNG. Did you ever have any in the Birmingham district?

Mr. KENNEDY. No.

Mr. YOUNG. Around Chattanooga?

Mr. KENNEDY. No.

Mr. YOUNG. The Union Iron Co. then, at the time of the merger, had not been running long enough to determine by actual operation what it could make, had it?

Mr. KENNEDY. The blast furnace and open hearth had not been running. Their wire mills, I think, were running for some time before that.

Mr. YOUNG. Do you know whether or not they were profitable?

Mr. KENNEDY. I don't know exactly what their wire mills did.

Mr. YOUNG. Were they, in your judgment, well located?

Mr. KENNEDY. Yes.

Mr. YOUNG. How about the Sharon plants?

Mr. KENNEDY. I was not especially familiar with the Sharon plants.

Mr. YOUNG. You do not know what the capacity of the Sharon plants were?

Mr. KENNEDY. No; not at present.

Mr. YOUNG. I mean at the time of the merger.

Mr. KENNEDY. No; I could not say at present.

Mr. YOUNG. So you could not give any idea of their value?

Mr. KENNEDY. No.

Mr. Young. In what did the great value of the Tennessee Coal & Iron Co. consist at the time it was taken over by the Steel Corporation?

Mr. Kennedy. Ore and coal largely.

Mr. Young. It had some blast furnaces?

Mr. Kennedy. Yes.

Mr. Young. It had an old rail mill, did it not?

Mr. Kennedy. Yes; it had a rail mill and an open-hearth plant there.

Mr. Young. I think we have some testimony that they never made rails in the old mill as cheap as $30 a ton actual cost. Do you know anything about that?

Mr. Kennedy. I do not.

Mr. Young. The mill has all been built over since the Steel Corporation took it?

Mr. Kennedy. I have no doubt they have revised it very considerably.

Mr. Young. Do you know how many blast furnaces, and the capacity of each, there were in the Donora plant, the total capacity?

Mr. Kennedy. There were two blast furnaces with a capacity of 1,000 tons combined, daily.

Mr. Young. And the Sharon?

Mr. Kennedy. I do not know. I was not familiar with the Sharon.

The Chairman. Do you know that, Mr. Reed?

Mr. Reed. Not accurately. I can have it for you to-morrow.

Mr. Kennedy. The Clairton had their blast furnaces.

Mr. Young. Was the entire interest of the Clairton merged into the Union?

Mr. Kennedy. No; I think not. I think that went direct to the corporation.

Mr. Young. So you say the principal value of the Tennessee Coal & Iron was in its ore and coal properties?

Mr. Kennedy. Yes.

Mr. Young. And the plants were a very small proportion of the entire value?

Mr. Kennedy. Yes; I should say they were comparatively small.

Mr. Bartlett. May I interrupt you a moment?

Mr. Young. Certainly.

Mr. Bartlett. Was not the chief value the nearness of the various ingredients used in the manufacture?

Mr. Young. I will cover all that.

Mr. Bartlett. Very well.

Mr. Young. You say that you have had no experience in iron mining?

Mr. Kennedy. Yes.

Mr. Young. Or in trading in mines?

Mr. Kennedy. Yes.

Mr. Young. Judge Bartlett suggests, and I suppose it is true, that ore, coke and coal, and limestone can be assembled cheaper at Birmingham perhaps than anywhere in the United States.

Mr. Kennedy. I judge so; yes.

Mr. Young. That is generally understood, is it not?

Mr. Kennedy. Yes.

Mr. YOUNG. Is it not also true, Mr. Kennedy, that the Tennessee Coal & Iron Co. has never been able to find a market for half its product in the South—that over half of it goes into the northern markets?

Mr. KENNEDY. I do not know as to present conditions on that.

Mr. YOUNG. That is the testimony that we have, that there is not a demand for over half.

Mr. KENNEDY. Is that as to rails or pig iron?

Mr. YOUNG. As to everything.

Mr. KENNEDY. I know they have shipped a great deal of iron to the North—a great deal of iron to Chicago.

Mr. YOUNG. Do you know what the rail rate is to Chicago from Birmingham?

Mr. KENNEDY. I do not remember at the moment.

Mr. YOUNG. About $4?

Mr. KENNEDY. I do not think quite that much.

Mr. YOUNG. Do you know what it is to Pittsburgh?

Mr. KENNEDY. From Birmingham?

Mr. YOUNG. Yes, sir.

Mr. KENNEDY. I do not know exactly.

Mr. YOUNG. Is it not a fact that the advantage in cost of production over the northern furnace is more than offset by the increased amount of the cost of transportation to reach the northern markets?

Mr. KENNEDY. I suppose it is about offset, if you were to go to the North. I know they compete in Chicago very vigorously for pig iron.

Mr. YOUNG. Now, assuming this situation is going to continue, and that the production there will increase so rapidly that still only half of the product would be consumed in the South, and half will have to be sold in the northern markets in competition with northern iron and steel, is it not true that that fact considerably militates against the value of that property over what it would if they could find a market for the whole of it near at home?

Mr. KENNEDY. Undoubtedly.

Mr. YOUNG. And that its ever being in a better condition depends upon whether the South develops rapidly enough, in comparison with the development of this industry, to give it a market for a better share of its product near home?

Mr. KENNEDY. That certainly would have a bearing on the value of the plant.

Mr. YOUNG. Was the Tennessee Coal & Iron Co., before it was purchased by the United States Steel Corporation, a profitable concern?

Mr. KENNEDY. I should say not conspicuously so.

Mr. YOUNG. For a short time it paid a dividend of 4 per cent on its preferred stock and nothing on its common, did it not?

Mr. KENNEDY. I think that is probably correct—I don't remember.

Mr. YOUNG. And during the greater period of its existence it never paid any dividend at all, is that correct?

Mr. KENNEDY. I judge it is.

Mr. YOUNG. Do you know Leonard C. Hanna, of Cleveland?

Mr. KENNEDY. Yes.

Mr. YOUNG. Is he a man of experience in iron mining and buying and selling of iron mines and iron ore?

Mr. KENNEDY. He is experienced in buying and selling ore. His firm handles Superior ore. I do not know whether he has had any experience in operating mines or not.

Mr. YOUNG. He operates several mines in my county. He operates mines also in the Mesabe.

Mr. KENNEDY. Well, his firm own mines out there, but whether he has anything to do with the actual operation or not I don't know.

Mr. YOUNG. Oh, yes. Mr. Hanna is not a member of the firm of M. A. Hanna & Co.

Mr. KENNEDY. I believe not up to the present time.

Mr. YOUNG. You know what his connection with the Tennessee Coal & Iron Co. was?

Mr. KENNEDY. I know he was connected with it for a while; I do not know any of the details.

Mr. YOUNG. You know he was a considerable owner?

Mr. KENNEDY. Yes.

Mr. YOUNG. He owned 10,000 shares about, I think, of the stock.

The CHAIRMAN. Most of them were in blocks of 10,000 shares.

Mr. YOUNG. Yes. No one, I think, with two exceptions, held any more. Would you think with his opportunities, his general knowledge of the business, he ought to be a good judge of the value of that property?

Mr. KENNEDY. I should think so.

Mr. YOUNG. At the time he was connected with it and when it was taken over by the Steel Corporation. Then if Mr. Hanna swore before this committee that he thought the price the Steel Corporation took it over for, that they paid a good fair value for it, would that influence your opinion any as to what the property was worth?

The CHAIRMAN. I do not recall that testimony.

Mr. YOUNG. That is exactly what he swore to, and that he got more for his stock than he paid for it.

The CHAIRMAN. He may have sworn to that, but my recollection is it is directly to the contrary, although I may be mistaken.

Mr. YOUNG. No; you are mistaken. Would that have any influence on your opinion?

Mr. KENNEDY. Yes; I think it would.

Mr. YOUNG. Do you know E. W. Oglebay, of Oglebay, Norton & Co., of Cleveland?

Mr. KENNEDY. Yes.

Mr. YOUNG. Do you know what their business has been?

Mr. KENNEDY. Yes.

Mr. YOUNG. The iron-ore business?

Mr. KENNEDY. Yes.

Mr. YOUNG. They have been miners and traders in iron ore?

Mr. KENNEDY. Yes.

Mr. YOUNG. Would you think Mr. Oglebay, from his connection, owning 5,000 shares of stock for a considerable period of time—would you think his judgment was worth anything as to what this property was worth?

Mr. KENNEDY. Yes; I should think it would be.

Mr. YOUNG. And if in his judgment the Steel Corporation paid about what the property was worth at that time, would that influence your opinion?

Mr. KENNEDY. I think it would.

Mr. YOUNG. Do you know John A. Topping, president of the Republic Iron & Steel Co.?

Mr. KENNEDY. Yes.

Mr. YOUNG. He had been chairman of the executive committee, I think it was, of the old Tennessee Coal & Iron Co. Is his business such that his judgment ought to be good upon the value of this property?

Mr. KENNEDY. Yes.

Mr. YOUNG. You know what his relations to it were?

Mr. KENNEDY. Yes.

Mr. YOUNG. Do you think that he would be better qualified to judge of the value of this property or less than yourself, considering his experience in the business generally and his connection with the Tennessee Coal & Iron Co.?

Mr. KENNEDY. He would probably know more about the property than I know about it.

Mr. YOUNG. Would he be in position to be a better judge of its value at the time of the sale?

Mr. KENNEDY. I presume he would; yes. You must recollect that I answered certain hypothetical assumptions, which I do not say were correct or were not. Mr. Topping, Mr. Oglebay, and Mr. Hanna may none of them think there was anything like that amount of coal or iron. So that their judgment might be very much with mine, if you give them the same basic condition to figure from.

Mr. YOUNG. Yes. Suppose it appears that when this sale of the majority interest in this stock was made to the Steel Corporation that Messrs. Hanna, Topping, and John W. Gates insisted that the minority stockholders should have the opportunity, if they chose, to sell their minority holdings at the same price, and that the minority holders did sell all of their holdings at the same price, voluntarily, would that have any effect upon your judgment of what the fair value of the property was?

Mr. KENNEDY. Very little.

Mr. YOUNG. Why?

Mr. KENNEDY. I would not think of selling out any property in which I or my friends or I and my friends had control without insisting that the minority should have a right to come in.

Mr. YOUNG. Even if you thought you were selling it at a sacrifice—less than what it was worth?

Mr. KENNEDY. No; I would insist that the minority had a chance to come along.

Mr. YOUNG. That is if they wanted to sacrifice themselves they should have the opportunity?

Mr. KENNEDY. Yes.

Mr. YOUNG. In the first hypothetical question that the chairman put to you he fixed the amount of the ore on this property at 700,000,000 tons and the coal at a billion tons, and you fixed the value at $100,000,000. How did you arrive at that value?

Mr. KENNEDY. I assume 5 cents a ton value for coal and 7.5 for ore.

Mr. YOUNG. I then suggested that the evidence to which the chairman referred was, there was only about 400,000,000 of this ore at present available, that the other 300,000,000 was not at present available, because of its lower quality, and you stated that that would not materially affect your idea of its value.

Mr. Kennedy. I stated that under those circumstances I would say 90,000,000, but I did not think that would make much difference.

Mr. Young. I think you are mistaken about that. The 90,000,000 was fixed on the basis of Herbert Knox Smith's report.

Mr. Kennedy. Possibly; yes.

Mr. Young. You stated the fact there was 300,000,000 of this ore available would not materially affect its value.

Mr. Kennedy. I said it would not not make a great difference on it; no.

Mr. Young. Why would it not? 7.5 cents on 300,000,000 would be a considerable amount of money.

Mr. Kennedy. 400,000,000, if it was all there was there, would be worth more per ton than 700,000,000 would, as the other 300,000,000 would be carried a great many years before you would mine it, and there would be the interest to cover.

Mr. Young. Then you raise the price on the 400,000,000?

Mr. Kennedy. Somewhat, I should; yes.

Mr. Young. As a matter of fact, did you make any calculation of that changed condition or did you jump at the 100,000,000—the valuation at the second time?

Mr. Kennedy. I did not say 100,000,000 the second time. I said I would not make a very great change on it, but made no estimate.

Mr. Young. But you made no detailed estimate?

Mr. Kennedy. No.

Mr. Young. On that?

Mr. Kennedy. No.

Mr. Young. After that you were presented with this estimate contained in Herbert Knox Smith's report, which is as follows:

	Tons.
Coking coal, proven	217, 000, 000
Steam and domestic coal, proven	68, 000, 000
Coking coal, probable	90, 000, 000
Steam and domestic coal, probable	351, 800, 000
Coking coal, possible	150, 500, 000
Steam and domestic coal, possible	520, 000, 000
Ores, red ores, reasonably assured, including tonnage already developed	175, 600, 000
Brown ores	None.
Red ore of lower grade, but which may be of future value	204, 000, 000
Additional probable tonnage, red ores	279, 600, 000
Brown ores	300, 150, 000
Red ore of lower grade, but which may be of future value	35, 000, 000

And you said that on those figures, after you had examined them, with the book before you, you would reduce the value to $90,000,000. In doing that, how did you arrive at that reduction of $10,000,000.

Mr. Kennedy. I do not remember exactly how I got at that. I did not save any notes.

Mr. Young. Did you make a note?

Mr. Kennedy. I made some figures. I think I assumed that coal would be about 726,000,000 tons, taking the proven and probable, and neglecting the possible.

Mr. Young. Did you put any value on this 670,500,000 tons of possible coal?

Mr. KENNEDY. No; I think not. I don't remember; I may have assumed a little of that. My estimates, made offhand here without any recent examination of the property are, of course, a mere guess. I have not attempted to lay any special weight on them.

Mr. YOUNG. They are not such estimates as you would be willing to advise any friend of yours to purchase on or sell on?

Mr. KENNEDY. Oh, no; of course not.

Mr. YOUNG. You have not had the opportunity to make the examination?

Mr. KENNEDY. Certainly not. The committee understands that thoroughly.

Mr. YOUNG. And you yourself do not place very much value on them except as a rough guess?

Mr. KENNEDY. I would not expect anyone to invest money on them; certainly not.

Mr. YOUNG. In this table the merchantable ore, which is described as reasonably assured—its existence reasonably assured—including all the tonnage already developed, is reduced to 175,600,000 tons. Would that, or would it not, make a very considerable reduction in the value of the property over what it would be if there were 700,000,000 tons of merchantable ore reasonably assured?

Mr. KENNEDY. Yes; it probably would.

Mr. YOUNG. Have you been familiar with the history of the development of the iron mining in this country during the last 50 years?

Mr. KENNEDY. Oh, somewhat. I have not been engaged in operating mines.

Mr. YOUNG. Do you assume that we are practically at the end of our discoveries of ore which is at present available because of its intrinsic chemical value and its location?

Mr. KENNEDY. No.

Mr. YOUNG. For the manufacture of iron and steel?

Mr. KENNEDY. No; I have made no such assumption.

Mr. YOUNG. Would not the history of the development and of its recent development during the last 10 years indicate that there are very large bodies of ore yet to be discovered in the old districts?

Mr. KENNEDY. Yes; I think there are great possibilities of further discoveries. Even in the old districts, from all I know.

Mr. YOUNG. Is it not also true, Mr. Kennedy, that, owing to the improvements which are steadily being made in the manufacture of pig iron and iron and steel, we are constantly being able to use profitably lower-grade ores than we did a few years ago?

Mr. KENNEDY. I should put that, that we are being compelled to use lower grades owing to the working out of the higher grades, which is a more correct method of stating it.

Mr. YOUNG. Is it not a fact that, notwithstanding that, which in itself is an extra expense, leaving out such abnormal times as those in the nineties, when there was a terrible depression in the steel business, that the cost of manufacture as a whole has been going down, taking a long period of time, notwithstanding this lowering of the grade of ore that we use? I do not mean comparing the nineties with the present, but going back to the nineties and coming up to the present time, taking the last 10 years.

Mr. KENNEDY. Commencing when?

Mr. YOUNG. Well, taking, for instance, the last 10 years for one thing.

Mr. KENNEDY. I suppose there may have been slight reductions in cost in respect to that 10 years; not very material, I think.

Mr. YOUNG. Yet the average percentage of iron ore used during the last 10 years has gone down 5 or 6 per cent, has it not?

Mr. KENNEDY. It has gone down some, I do not think 5 or 6 per cent, in 10 years.

Mr. YOUNG. Does it average over 55 now?

Mr. KENNEDY. No; I think not.

Mr. YOUNG. Then it averaged 60 ten years ago.

Mr. KENNEDY. I do not think quite 60.

Mr. YOUNG. Fifty-nine?

Mr. KENNEDY. Possibly 58 or 59.

Mr. YOUNG. You spoke something about the cost of making pig iron in India. You built some furnaces out there?

Mr. KENNEDY. Yes.

Mr. YOUNG. I understand you they had been in operation about two months when you left there?

Mr. KENNEDY. One of them had been in operation about two months; yes.

Mr. YOUNG. And the other not at all.

Mr. KENNEDY. It had not started; yes.

Mr. YOUNG. Do you think that two months' experience is sufficient to base a judgment on what you could make pig iron for in those furnaces?

Mr. KENNEDY. No; I made no estimate of what we could make pig iron for.

Mr. YOUNG. You stated that you had to take the skilled labor over there?

Mr. KENNEDY. Yes.

Mr. YOUNG. In the course of time the native labor—a portion of it—will become skilled, will it not?

Mr. KENNEDY. Possibly; in a long time.

Mr. YOUNG. Has not that been the history of every section where you establish new industries—the people gradually learn it and become skilled?

Mr. KENNEDY. Yes.

Mr. YOUNG. Will that not have a tendency to reduce the cost of labor when you can get the native labor, a large portion of it, in the skilled positions?

Mr. KENNEDY. It may; but of course the labor cost of 80 cents per ton, you could not get many dollars off by getting skilled labor.

Mr. YOUNG. No. Now, that is in the cost of making the pig iron?

Mr. KENNEDY. Yes.

Mr. YOUNG. Where do you get your ore in India; how far away from your furnaces?

Mr. KENNEDY. At least 38 miles.

Mr. YOUNG. What is the labor employed in the mines, in the mining?

Mr. KENNEDY. There practically is no mining as yet. They are simply shipping float ore from the foot of the hills. They have not attacked the ledge yet.

Mr. YOUNG. Do you know what they have to pay for the men that do the work?

Mr. KENNEDY. Yes, in a general way.

Mr. YOUNG. How much?

Mr. KENNEDY. Seven cents.

Mr. YOUNG. Seven cents for what?

Mr. KENNEDY. For a day's work.

Mr. REED. How many hours is that?

Mr. KENNEDY. About 10 hours.

Mr. YOUNG. How many of them does it take to do what the ordinary man that you get in the mines over here would do, whom, I think, the chairman assumes has lived in this country two or three years, or, perhaps, five years? How would you compare their labor with this labor for this kind of work?

Mr. KENNEDY. I could not tell that with much exactness, but it would take eight or ten of those people to do what one man would do here.

Mr. YOUNG. Why so?

Mr. KENNEDY. Well, they are undersized people, not very strong.

Mr. YOUNG. Are they any smaller than the south Italians?

Mr. KENNEDY. Yes; I should judge they were.

Mr. YOUNG. Much? I am referring to the fellow who comes from Sicily, Naples, and south.

Mr. KENNEDY. Yes; I should say on the average quite a little lighter people.

Mr. YOUNG. Have you begun to use machinery in the mining operations?

Mr. KENNEDY. No.

Mr. YOUNG. Machinery for drilling?

Mr. KENNEDY. No; not yet.

Mr. YOUNG. If it took eight of them it would amount to 56 cents a day for one of our men.

Mr. KENNEDY. Yes.

Mr. YOUNG. If it takes 10 it would amount to 70 cents. What does the American miner get?

Mr. KENNEDY. I do not know exactly what it is now, but a good deal more than that, of course.

Mr. YOUNG. Where does your coal come from which you use there?

Mr. KENNEDY. It comes from what is known as the Jheria field.

Mr. YOUNG. How far away?

Mr. KENNEDY. Eighty miles.

Mr. YOUNG. Is that coked?

Mr. KENNEDY. It is coked at the plant.

Mr. YOUNG. Do you know anything about the mining conditions where that is mined?

Mr. KENNEDY. No; I did not have a chance to go to the mines.

Mr. YOUNG. Have you any reason to believe the labor there is any more expensive than it is at these mines where it is 7 cents a day?

Mr. KENNEDY. My impression is that it is somewhat more expensive.

Mr. YOUNG. Do they get as much done?

Mr. KENNEDY. I do not know about that; I did not go up there.

Mr. YOUNG. You really made no investigation of that?

Mr. KENNEDY. Not of the labor at the coal mines. The people do not run their own coal mines. They buy their coal.

Mr. YOUNG. The transportation, I think you stated, was about 3 mills per ton-mile?

Mr. KENNEDY. Yes.

Mr. YOUNG. Don't they make any difference over there between long hauls and short hauls?

Mr. KENNEDY. Not on this product.

Mr. YOUNG. Is that because the hauls are all about the same distance? Is not that principle applied over there generally as to the long haul?

Mr. KENNEDY. Oh, I judge so; yes; I don't know. I did not go into that in general as to freights in general, but the freights for this plant are based on that.

Mr. YOUNG. It is a fact, is it not, that ordinarily a long haul can be made at a lower rate per mile than a short haul?

Mr. KENNEDY. Yes.

Mr. YOUNG. What is the cause of that?

Mr. KENNEDY. The cause of that is there are terminal charges at the start and at the finish, which are the same for one haul as for another.

Mr. YOUNG. You say terminal charges, but actually there is a terminal cost, is there not?

Mr. KENNEDY. Yes; perhaps it is more correct to say.

Mr. YOUNG. The charge does not always represent the whole cost.

Mr. KENNEDY. There is a terminal cost. The cars have to wait at each end and have to be handled more or less, and there are certain costs connected with originating and winding up the traffic at the other end.

Mr. YOUNG. Who loads and unloads cars over there, on which coal and ore are carried, to get this rate of 3 mills?

Mr. KENNEDY. The steel company loads and unloads the ore.

Mr. YOUNG. You were asked your judgment on the value of the Carnegie Co. previous to its purchase or the merger, whatever you call it, by the Steel Corporation, and you said you would put it somewhere between the values fixed in the suit by the defendants and by the complainants, and suggested $160,000,000.

Mr. REED. That is for the Carnegie Steel Co. (Ltd.).

Mr. YOUNG. Yes. Did that include all the property that went into the Steel Corporation as the Carnegie Co., the corporation?

Mr. KENNEDY. No. I judge possibly there may have been additions after that time.

Mr. YOUNG. One addition was the H. C. Frick Coal & Coke Co., was it not?

Mr. KENNEDY. I am not certain. I think that went to the Carnegie Co. before that time, did it not?

Mr. REED. It was owned by the individuals at the time of the suit.

Mr. YOUNG. That was added afterwards. Well, now, you have heard, of course, as everybody has in the iron and steel business, about a certain option that was given by the Carnegie Co., generally spoken of as the Moore option.

Mr. KENNEDY. Yes.

Mr. YOUNG. That embraced the old companies before the Henry C. Frick Co. was added. Now, was Mr. Frick conversant with the value of the property?

Mr. KENNEDY. I think so.

Mr. YOUNG. Was he as conversant as any? Do you think there were any who knew more about it than Mr. Frick?

Mr. KENNEDY. I judge he was as conversant with it as anyone.

Mr. YOUNG. Would the facts which now appear, that Mr. Frick was one of the persons who obtained that option, that he joined with other gentlemen in obtaining it, that the price was $250,000,000, and that Mr. Frick and these other gentlemen put up a forfeit of $2,000,000 in order to obtain an option on that property at $250,000,000, would that affect your mind in any way as to the value of that property?

Mr. KENNEDY. Is that on the same property?

Mr. YOUNG. Yes. That is, before the Henry C. Frick property went in.

Mr. KENNEDY. I do not know just how much that would affect my mind. I do not remember just the exact circumstances. My impression is that was largely contingent on other consolidations going with it; but I don't know.

Mr. YOUNG. Oh, no; there was no contingency at all. It was a written contract. It is in our records; and the money—at least a portion, a million and some odd thousand dollars which went to Mr. Carnegie—was acually put up and paid over to Mr. Carnegie, although the parties, when they failed to make the deal go, tried to get him to release some portion of it, and he would not do it. They actually risked their money on the chance.

Mr. KENNEDY. Yes; but that chance, however——

Mr. YOUNG (interposing). It failed.

Mr. KENNEDY. That chance, however, as I recall, involved the possibility of combining that property with other properties, did it not?

Mr. YOUNG. No; not at all.

Mr. KENNEDY. In other words, did not the Moores and Mr. Frick vote to form a still larger combine in case they took it?

Mr. YOUNG. What they may have hoped does not appear. This was a simple proposition to take this property at $250,000,000, for which they put up a forfeit of $2,000,000.

Mr. KENNEDY. Whether that would affect my mind or not would depend on what was the intention to do with it. If they took an option. hoping to form a corporation somewhat like the Steel Corporation was later formed, and did not succeed in making the deal go, and therefore had to drop the option, that would create one impression.

The CHAIRMAN. Not to interrupt you, Mr. Young, do you know whether it is true or not that the Moores had formed these concerns and that they had made approximately $100,000,000 out of the banking operations prior to this time?

Mr. KENNEDY. I know the Moores have put together some large combinations, and my impression was that this option was taken in the hope of putting together a still larger one, which was found later could not materialize, and therefore they were unable to carry the option through.

The Chairman. Did not they put together all these combinations, I mean prior to the formation of the United States Steel Corporation, except the National Tube Co., the Federal Steel Co., and the American Bridge Co.?

Mr. Reed. And the American Steel & Wire Co.

The Chairman. No——

Mr. Reed (interrupting). They put together four of them, Mr. Chairman. If I may straighten this matter out, they took the Carnegie option before they made any of these combinations that are known as the Moore combinations. Those they did make were the American Sheet & Steel Co., the American Tin Plate Co., the American Steel Hoop Co., and the National Steel Co. Those four consolidations were all made after the taking of the Carnegie option.

Mr. Young. Yes. The chairman asked you, Mr. Kennedy, a question about the economies which would result from combining the plants at Pittsburgh with plants at Chicago, and so on. You stated there were economies in marketing. The chairman then asked you if that would amount to the interest on $596,000,000 of bonds and the overhead charges of the holding company, the United States Steel Corporation, to which you practically answered no. Are you able to see that the interest on those bonds had anything to do with that question?

Mr. Kennedy. No; I do not exactly see that.

Mr. Young. It would not make any difference as to economy in operation whether this corporation borrowed $596,000,000 or whether they subscribed it and put it in in stock instead of bonds, would it?

Mr. Kennedy. Not that I can see.

Mr. Young. Not unless they borrowed their money at a little lower rate than they could make on the money with which they would have to replace it.

Was there anything, in your judgment, entering into that question of economy—as an adverse factor I mean—except the overhead charges of the holding company, what that organization cost?

Mr. Kennedy. No; I think of nothing else.

Mr. Young. Did not the fact that organization enabled them to practice a good many economies as to the organization of the subsidiary companies, which to a large extent anyway offset the cost of the holding company?

Mr. Kennedy. There may have been some economies in this line.

Mr. Young. Then there were a good many of the smaller companies combined, were there not?

Mr. Kennedy. I believe so.

Mr. Young. And their charges for officials and so on eliminated; is that true?

Mr. Kennedy. I believe so.

Mr. Young. When we were discussing the question of the ownership of railroads by industrial concerns you expressed, as I understood it, in the first place, the opinion that this was a dangerous thing because of the danger that an advantage would be taken by the industrial company. Later I understood you to say that you still thought it was a dangerous thing unless by some sort of Government control the evils could be prevented. Was I correct?

Mr. KENNEDY. Yes.

Mr. YOUNG. You are, of course, aware that the Interstate Commission has jurisdiction, on its own motion, without complaint, not only to fix the rates, but to fix the division of rates, where, for instance, an industrial plant has one of these terminal roads which start as a mere plant facility, and they begin to branch it out a little, and it takes on to some extent the character of a common carrier. The Interstate Commerce Commission has the power now to say whether that road performs such a service in transportation that it is entitled to any share of the rate, and if so, just how great a share it is entitled to.

Can you see any greater difficulty in their determining that question than there is in determining what the full through rate should be? Is it any more difficult to do that?

Mr. KENNEDY. They are both pretty difficult, I imagine.

Mr. YOUNG. But our whole legislation was framed on the theory that can be done, and our commission is constantly doing it.

Mr. KENNEDY. I think the commission is doing the best they can, but it is a long and tedious job, and the inertia of things in general make it require a long time to correct things which are not right.

Mr. YOUNG. As a matter of fact there are not a great many industrial concerns so large that they have these railroads.

Mr. KENNEDY. No; not a great many.

Mr. YOUNG. They would not make a great many cases to go before the Interstate Commerce Commission if they all went there?

Mr. KENNEDY. I don't know how many. I suppose there would be a good many, probably.

Mr. YOUNG. To repeat my question: Can you see that it would be any more difficult for them to determine the share of each road in a through rate, or whether a certain road was entitled to any share or not, than it would be to determine what the whole through rate should be?

Mr. KENNEDY. No; I do not see why there should be any greater difficulty.

Mr. YOUNG. Yet this is a practical scheme we have devised for fixing rates and preventing rebates and abuses. Do you see any special difficulty in applying it to a situation like this or an industrial-owned railroad?

Mr. KENNEDY. If it is practical—which I do not believe—I do not see any special difficulty in applying it.

Mr. YOUNG. That is, you do not believe in the entire scheme; you think the entire scheme of Government-fixed rates is impracticable?

Mr. KENNEDY. I think the scheme as at present sought to be operated is impracticable.

Mr. YOUNG. Could you suggest any changes in it that you think would make it more practicable?

Mr. KENNEDY. Yes.

Mr. YOUNG. What?

Mr. KENNEDY. If the Interstate Commerce Commission were given power to fix rates to go into effect at once and remain in effect until decided to be mistaken or wrong by the Supreme Court of the United

States, the thing would be very much more practicable than it is at present.

Mr. YOUNG. In what way does that differ from the present?

Mr. KENNEDY. At present there is a Commerce Court which seems to be pretty steadily reversing a large majority of the decisions that the Interstate Commerce Commission is making, so far as I note the trend of things.

Mr. YOUNG. They have been pretty largely reversed themselves by the Supreme Court, have they not, and pretty rapidly?

Mr. KENNEDY. Possibly so.

Mr. YOUNG. Their jurisdiction has been defined in a very late decision of the Supreme Court.

Mr. BARTLETT. And was defined in the act, and there ought not to be any doubt about what Congress meant when it established it.

Mr. YOUNG. I agree entirely with you.

Mr. BARTLETT. And I do not think, if we can get the assistance of our friends on the other side, that the court would have much more opportunity to make any more decisions after this Congress adjourns.

Mr. YOUNG. I am not certain of that.

Mr. KENNEDY. I could suggest, further, that if a good many of the laws were made more definite and a good many things in connection with our Government were made plainer and more definite it would be a great help, especially some very indefinite phrases, such as "the taking of property without due process of law." If the phrase "due process of law" could be clearly defined, it would help things a great deal.

Mr. YOUNG. It has been defined by the courts for several decades—I might have said several hundred years—so no lawyer would have any right to question that.

Now, Mr. Kennedy, the chairman called your attention to these four roads in Minnesota, running from the Mesabi and Vermilion Ranges, and stated to you that the rate was 80 cents up there, and assuming it ought to be only 40, asked you what advantage this would give to the Steel Corporation, which owned the roads, over its competitors in the manufacture of iron and steel per ton of pig iron, and you stated it would be $1.60. A little later you were asked about the rate from Conneaut to Pittsburgh, which is 96 cents, and you stated your own judgment that that ought to be 40 cents—that was your judgment of a fair rate. And as it was 96 cents there would be 56 cents a ton, and you said there was another advantage of $1.12.

So in the case of these two roads there would be an advantage to the Steel Corporation of $2.72 a ton, assuming the chairman's figure of 40 cents.

I was at a little loss to understand why a charge of 40 cents a ton on the Missabe should give the Steel Corporation an advantage of $1.60, while the larger overcharge of 56 cents a ton from the Lakes to Pittsburgh only gave them an advantage of $1.12. Is there not something wrong there?

Mr. KENNEDY. No, sir. In the haul from the Lakes to Pittsburgh they only get an overcharge on their own ore. In the haul from the mines to Duluth, in case there is an overcharge, they get the overcharge on their own ore and also on their competitors' ore, assuming there was half of each, which I did in my answer.

In other words, they get the rebate on their own stuff plus the rebate on their competitors' stuff.

Mr. YOUNG. Why is an overcharge on their own road any advantage to them? They simply take the money out of one pocket and put it in another, don't they? Is it not a matter of fact that would be 80 cents on the assumption the rate should be half what is was?

Mr. KENNEDY. No; I think not. I think my figures are correct.

Mr. YOUNG. If the rate should be 40 cents, and it is 80 cents, then the railroad company makes 40 cents a ton too much, does it not?

Mr. KENNEDY. Yes.

Mr. YOUNG. But if the steel company pays that 40 cents to the railroad company, does not the steel company make 40 cents a ton less than it ought to?

Mr. KENNEDY. If the steel company were hauling out ore for a thousand tons of pig iron for themselves and an equal amount for another company, they would bring out 4,000 tons of pig iron?

Mr. YOUNG. Yes.

Mr. KENNEDY. On which they would make $1,600 extra profit.

Mr. YOUNG. Yes; for the railroad.

Mr. KENNEDY. For the railroad.

Mr. YOUNG. Yes.

Mr. KENNEDY. And they would then be equal for their competitor beyond that?

Mr. YOUNG. Yes.

Mr. KENNEDY. Therefore they would be $1,600 ahead of him on the whole transaction and they have made a thousand tons of pig iron.

Mr. YOUNG. When their own company pays $800 of that themselves?

Mr. KENNEDY. Yes. Suppose, to illustrate further, that the rate is 40 cents too high, and the steel company haul out on their own road 2,000 tons of ore and their competitor has hauled out on another road 2,000 tons of ore.

Mr. YOUNG. Yes.

Mr. KENNEDY. In that case they would still be $800 ahead of him.

Mr. YOUNG. Yes.

Mr. KENNEDY. If, instead of the outside road making that other $800, they made it, they are $1,600 ahead of him in a competitive way.

Mr. YOUNG. We will assume, for instance, for the purpose of an example, that it costs the railroad company 40 cents a ton to haul this ore, and they get 80 cents a ton for it; they haul half of the ore for the Carnegie Co. and half for Jones & Laughlin.

Mr. KENNEDY. Yes.

Mr. YOUNG. Do you think they make anything on their own ore? Do you think the United States Steel Co. makes anything on hauling its own ore by that transaction?

Mr. KENNEDY. If they did not make anything they would gain $800 on the other end, by having ore, to begin with.

Mr. YOUNG. Is it not the actual cost to them in any instance? It might have cost them more to hire it, but the actual cost was 40 cents. If the railroad gets 80 cents, it gets it from the Carnegie Co. We will assume it is going to the Carnegie Co., which is another branch of the Steel Corporation.

Mr. **Kennedy**. Yes.

Mr. **Young**. The railroad company makes that 40 cents, but the Carnegie Co. pays it, and what the Steel Corporation make at one end it loses at the other. So there is no profit in the business on their own ore in transporting it that way. There would be a profit, of course, from hiring somebody else to do it at 80 cents.

Mr. **Kennedy**. Still there is a profit over Jones & Laughlin, if you take them as the illustration?

Mr. **Young**. Yes; of the 40 cents.

Mr. **Kennedy**. No; of the 80 cents.

Mr. **Young**. Well, 80 cents for two tons.

Mr. **Kennedy**. Yes; of the $1.60.

Mr. **Reed**. Just for a suggestion, Mr. Young, is not this what Mr. Kennedy means: If I pay you 40 cents you are not entitled to, you are 80 cents better off than I am. You have gone up 40 cents in the scale of assets and I have gone down. Is not that what you are driving at?

Mr. **Kennedy**. When it comes to that, it seems you would have to sell them for 80 cents higher in order to get out even.

Mr. **Young**. You mean 80 cents a ton on pig iron, or $1.60.

Mr. **Kennedy**. $1.60 that I pay you, which is 80 cents more for my ore than I ought to pay you. I am $1.60 behind you in the race for competition, because you have made 80 cents and I have lost 80 cents, and if we go on to sell I have got to sell $1.60 above you to compete. You can figure it every way you can, and come right back to that.

Mr. **Young**. That is, I have made more than I would, you mean, if I paid somebody else 80 cents to transport my ore?

Mr. **Kennedy**. Certainly.

Mr. **Young**. Yes.

The **Chairman**. To make this plain and not interrupt you, I think it will clarify the whole atmosphere. Suppose the Steel Corporation did not haul the ore for anybody but themselves, and they hauled it 40 cents cheaper on the ton than any other company could haul it. Would not they have an advantage of 40 cents?

Mr. **Young**. Undoubtedly; but that is not this situation.

The **Chairman**. But, now, if in addition to saving 40 cents on their own ore they would haul the other fellow's ore, would not they make 40 cents more?

Mr. **Young**. On his ore?

The **Chairman**. Exactly. That would be a difference of 80 cents a ton.

Mr. **Kennedy**. Let me give an illustration a little further, if I may. Suppose the Carnegie Co. made 1,000 tons of iron and nine other people made a thousand tons each each day. Suppose the Carnegie people on their railroad hauled the whole 10,000 tons of ore at 40 cents more than they should have.

Mr. **Young**. Yes.

Mr. **Kennedy**. Would not they be able to sell iron $8 a ton cheaper in the market than any of the rest of them?

Mr. **Young**. At the same time, Mr. Kennedy, they have an investment in this railroad company, do they not?

Mr. **Kennedy**. Of course they do. I am only speaking of what is extra freight—more than they should pay.

Mr. YOUNG. Is not this finally what you mean: That a company which owns its own mines, which transports its own ore, which owns its own coal and makes its own coke, and transports its own coke, and with these, and the limestone which it owns itself, makes iron and steel—that it can do it cheaper than the company which has a much smaller investment and buys its pig iron and makes iron and steel out of that? Is not that what it amounts to?

Mr. KENNEDY. No; it amounts to more than that. It is on the basis of a company owning a public-utilities transportation line and getting 1 cent a ton more than they should get, and hauling one-half of the ore for themselves and one-half for their competitors—it gives them an advantage of 4 cents a ton on their product, and you can not get it anywhere else, no matter how you juggle the figures.

Mr. YOUNG. I do not think I am juggling figures.

Mr. KENNEDY. No matter how many ways you figure it, it will all come back to that.

Mr. YOUNG. Mr. Kennedy, suppose, we will say, it costs this road 30 cents a ton operating expenses; it has an investment of twenty-seven millions in this road—if it got 40 cents under those circumstances, you would not think it was making an unreasonable profit on the haul, would you?

Mr. KENNEDY. No; not if the operating cost was 30 cents.

Mr. YOUNG. If it paid somebody else 40 cents a ton for hauling that ore, of course it could make pig iron 20 cents a ton cheaper by hauling it itself.

Mr. KENNEDY. No.

Mr. YOUNG. If you do not consider the interest on the investment.

Mr. KENNEDY. Oh, well, I don't mean that. If 40 cents is a fair rate to give them interest on their investment, they are just as well off as if they hired the ore hauled at 40 cents from somebody else.

Mr. YOUNG. Yes; there would be a profit there of 10 cents a ton.

Mr. KENNEDY. That is accounted for by the capital that they are entitled to.

Mr. YOUNG. Yes; that is what I have been trying to get at.

Mr. KENNEDY. That they are entitled to; no one denies that.

Mr. YOUNG. Under the circumstances that I assumed, that the 40-cent rate was a fair rate, and they handled half of the ore for themselves and half for Jones & Laughlin, we will say, then how much advantage would they have over Jones & Laughlin?

Mr. KENNEDY. If they charged 40 cents?

Mr. YOUNG. If they charged 40 cents and that was a fair rate—we assume that is a fair rate—and there is 10 cents a ton profit in it.

Mr. KENNEDY. There would be no advantage.

Mr. YOUNG. Because of the investment?

Mr. KENNEDY. Because of the investment.

Mr. YOUNG. Then, how can you figure if they charge 40 cents too much they would get $1.60 the advantage of Jones & Laughlin? Jones & Laughlin would pay 80 cents more; the cost to the Steel Corporation would be just the same.

Mr. KENNEDY. That is right. If you and I were making pig iron, and I paid you 80 cents which I did not pay you, you can beat me out $1.60, because it has added 80 cents to your profit and taken 80 cents from mine.

Mr. YOUNG. And I furnish the railroad to do it?

Mr. Kennedy. It does not make any difference if it is extra profit you should not have. That is what I am speaking of, no matter whether for rates or anything else. If I pay you 80 cents I should not pay you, I am at a disadvantage of $1.60. You have not only made 80 cents, but put me in a hole to the extent of 80 cents. And if we go out and compete in a neutral market, there is that much difference between us.

Mr. Reed. Will you not pursue the illustration further and ask whether if the Interstate Commerce Commission should fix the rate on those roads at 1 cent less than a fair rate the competitors would have four times that much advantage over the Steel Corporation on each ton? That is so, is it not?

Mr. Kennedy. That is correct, on the assumption that half goes to each.

Mr. Young. I understand what you mean.

The Chairman. And if the converse of the proposition is true you can multiply by four all the unearned increments?

Mr. Reed. Certainly.

Mr. Young. That is on the assumption they carry just as much for others as they do for themselves.

Now, as to this rate from Conneaut to Pittsburgh, and from Pittsburgh to Conneaut, in which direction is there the most tonnage moving?

Mr. Kennedy. I judge toward Pittsburgh on the Corporation Road, although I am not sure as to the tonnage.

Mr. Young. Is that or is that not true of all the rest of the roads running from the Great Lakes to Pittsburgh?

Mr. Kennedy. I think the haul toward Pittsburgh would be the greater of the two; yes.

Mr. Young. What is the difference, if any, in the cost per ton of hauling coal and iron ore over the same road?

Mr. Kennedy. I do not think there is any material difference.

Mr. Young. They cost about the same?

Mr. Kennedy. I should say so.

Mr. Young. If there is more freight moving from Conneaut to Pittsburgh, we will say, or say from the Lakes to Pittsburgh, than there is from Pittsburgh to the Lakes, the natural tendency would be for these roads, in order not to go back empty, to give a little better rate back than they do going south?

Mr. Kennedy. Possibly so; yes.

Mr. Young. You think that that is wrong, that they ought to give the same rate both ways, if the cost is the same on your theory.

Mr. Kennedy. No; I would not say that exactly.

Mr. Young. You think that is a business condition that justifies the lower rate north than south?

Mr. Kennedy. Possibly so. That is a very large question, and a good deal could be said on both sides of it.

Mr. Young. You spoke about our sales of steel abroad. Do we sell any steel in any country abroad that makes steel itself; that is, in any appreciable quantity?

Mr. Kennedy. Oh, I have not kept in touch with that. I think a good many sheet bars have gone to Wales in the past, but I do not know exactly. Mr. Farrell could give you that exactly.

Mr. YOUNG. According to his statement the sale is not appreciable even in England. By England I mean Great Britain, and no sales in Germany, France, and Belgium, owing to their high tariffs there.

Mr. KENNEDY. Yes.

Mr. YOUNG. You spoke of the disorganization of the tube business in 1898 and 1899.

Mr. KENNEDY. Yes.

Mr. YOUNG. And said they were all selling at a loss, and there was a terrible disorganization of the business. Was it any worse in the tube business than it was in the other branches of the steel business at that time?

Mr. KENNEDY. I think it was a little worse, although some of the others were possibly pretty bad.

Mr. YOUNG. Was it any worse in the steel business than it was in wheat?

Mr. KENNEDY. Wheat?

Mr. YOUNG. Yes.

Mr. KENNEDY. I do not remember the wheat market at that time.

Mr. YOUNG. You remember in 1896 probably, when the slogan of a certain distinguished political leader was that silver and wheat should keep together, and a dollar a bushel was the only price for wheat?

Mr. KENNEDY. Yes; it seems to me I have some hazy recollection of that.

Mr. YOUNG. You remember the price of wheat was very greatly depressed at that time?

Mr. KENNEDY. Yes.

Mr. YOUNG. Do you think the tariff had anything to do with depressing the price of wheat?

Mr. KENNEDY. No; I do not think that it had.

Mr. YOUNG. Was it not true that at that period—and none of us agree as to the causes—but was it not the fact that in that period beginning about 1892 or 1893, and from then on, beginning to get a little better in 1899, that there was a great depression in all lines of business all through the country?

Mr. KENNEDY. Yes; I think there was.

Mr. YOUNG. That affected business which was protected by the tariff and business which was not protected by the tariff, did it not?

Mr. KENNEDY. Yes.

Mr. BARTLETT. When was that, 1893?

Mr. YOUNG. Yes; and on. Now, I understood you to say that you thought an unduly high tariff—which you believed there was at that time on tubes, and probably you are right—led to the building of a great many tube plants in this country?

Mr. KENNEDY. Yes; I felt that was one reason why so many had been built.

Mr. YOUNG. And the result of that competition between these different plants was to bring down the price not only to a reasonable price but below a reasonable price?

Mr. KENNEDY. Yes.

Mr. YOUNG. I suppose the ultimate consumer got the advantage of that condition while it lasted?

Mr. KENNEDY. Yes; while it lasted, to a certain extent.

Mr. YOUNG. Was it not also true that during those years when there was this depression not only in the iron and steel business, but everywhere else, that the production of iron and steel did not grow as it has at other times in our history when the industry was more prosperous, but that it halted?

Mr. KENNEDY. Undoubtedly.

Mr. YOUNG. The demand was less?

Mr. KENNEDY. Yes.

Mr. YOUNG. And for a while the lower the price the less the demand seemed to be; that is true, is it not?

Mr. KENNEDY. That is true.

Mr. YOUNG. That in itself would have a great effect upon prices, would it not; the falling off of the demand?

Mr. KENNEDY. Yes; the falling off of the demand has an effect on the prices.

Mr. YOUNG. Something has been said about the fact that the Steel Corporation had a capacity of 16,000,000 tons of pig iron per annum and you only made 11,000,000 tons in 1910, I think it was.

Mr. REED. In 1910 and 1911.

Mr. YOUNG. Yes; and the fact was referred to. Mr. Farrell had sworn there was a total pig-iron capacity in this country of about 40,000,000 tons, although they had never made over 27,300,000 tons. Is it not a fact that the production of pig iron and also the production of steel in this country doubled from 1900 to 1910?

Mr. KENNEDY. I think it is. I do not remember the exact figures, but I think that is substantially correct.

Mr. YOUNG. Something more than that. In 1900—these figures are from the Statistical Abstract, which is pretty generally correct—it was 10,639,000 tons, and in 1910, 26,094,000 tons. In fact it grew nearly 150 per cent, fully 150 per cent.

In view of that fact and the history in the iron and steel business in the past, would you think that a capacity of 40,000,000 tons of pig iron was any more than a prudent provision against a sudden demand that was liable to come when business revived?

Mr. KENNEDY. No; I would not say that was an exorbitant provision for a good revival of business.

Mr. YOUNG. Would not the natural effect of that be to prevent, or tend to prevent, a violent and unreasonable rise in prices when the demand came, the fact that they had the capacity in this country to meet it?

Mr. KENNEDY. Yes; I think that would be the result.

Mr. YOUNG. And in that way it would be a wise business policy, would it not?

Mr. KENNEDY. Yes.

Mr. YOUNG. To prepare in time of depression for the turn that we know always comes.

I think you stated in comparing what the chairman called the foreign and domestic prices—but what you meant was the price at the mill for the domestic use and the price at the mill for the export.

Mr. KENNEDY. Yes.

Mr. YOUNG. Do you think that the policy which all nations seem to practice of selling a certain amount of their product abroad cheaper than they do at home—that is, a less price at the mill—ought to be stopped?

Mr. KENNEDY. Yes; at least to a certain extent. I think the Government which would permit some of the things which go with that naturally would not be doing right.

Mr. YOUNG. What do you mean by the things that go with it?

Mr. KENNEDY. I mean the railroads of the country carrying stuff for less than cost for export business, and carrying stuff for less than cost for import business, making ridiculously low prices for stuff brought in from abroad, which in effect nullifies the tariff. We see ourselves arresting a woman for bringing in a few pearls, and at the same time allowing people to sacrifice thousands of dollars on a railroad to nullify the effect of a tariff on something else. I do not think that is equitable or right. I think there are a lot of those things that ought to be stopped. I think the whole business of carrying export and import goods for less than they are carried for our own people, is inequitable and wrong, and I think Congress should get at that vigorously.

Mr. YOUNG. Do you think the carrying of goods for export for less than you do goods for domestic use rests exactly on the same foundation as carrying imported goods for less than you do domestic goods?

Mr. KENNEDY. Possibly not on exactly the same foundation, but I think it is inequitable. I think it is wrong that a man living in New York should pay more for his intrastate haul in order to let somebody else haul these goods for less than cost on the same railroad or another railroad.

Mr. YOUNG. Then you entirely disapprove of the system which prevails in Germany, where transportation is largely under the control of the Government, in making a different rate for export goods.

Mr. KENNEDY. That is different.

Mr. YOUNG. Why?

Mr. KENNEDY. That does not touch any one individual for the difference.

Mr. YOUNG. Nobody gets any benefit of that but the exporter, does he, of that latter rate?

Mr. KENNEDY. Possibly not.

Mr. YOUNG. Every exporter can get the advantage of it, but there are few exporters.

Mr. KENNEDY. Possibly not, but the bill is footed by the whole Nation, and it makes it different from where it is footed by other people who use the railroad.

Mr. YOUNG. Then your idea is——

Mr. KENNEDY. I don't know that that is wrong.

Mr. YOUNG (continuing). That somebody is charged more.

Mr. KENNEDY. Of course.

Mr. YOUNG. Why "of course"?

Mr. KENNEDY. The railroads can not haul all their freight below cost; somebody must put it on.

Mr. YOUNG. Right there, what do you mean by cost?

Mr. KENNEDY. Well, cost is indefinite, of course. I understand that. The true cost of a railroad should be enough to pay their operating expenses and a fair interest on their capital. That is one cost. You can have other costs, of course.

Mr. BARTLETT. What do you mean by the capital? You would not mean their excessive capital?

Mr. KENNEDY. No; not on watered capital, but on reasonable capital, assuming the railroad is honestly built.

Mr. YOUNG. This is a pretty live question. For instance, it is recognized by everybody that fruit from California is carried to the eastern market at a price which is below the actual cost of the business, provided you charge against these shipments of fruit their proportion of the overhead charges, the interest on the capital, and all that sort of thing. If you did that there would be no fruit sent out from California. It could not stand the rate.

The railroads claim, however, that having the road there, having their organization, having their train crews and engines, and all that, they can carry this fruit at an added expense over what they would pay if they did not carry it, which is less than what they get for it, and that therefore the practice is justified, because it builds up an industry in California and they do not actually lose money by it, although they could not carry all their business at that rate.

What would you say about a proposition of that kind?

Mr. KENNEDY. There are two sides to that question. They do not go below what is called their limit, or shop cost.

Mr. YOUNG. No; they do not go below the extra operating cost.

Mr. KENNEDY. It may be better sometimes to take that stuff above your operating cost, without interest on your capital, or only a partial interest on your capital, than to not originate the business.

Mr. YOUNG. The railroads make exactly the same claim, whether just or not, with regard to export business. They say they are aiding the domestic manufacturers to introduce their goods abroad; that they want to help them. Do you think there is anything in that claim?

Mr. KENNEDY. Oh, yes; there is something to be said on that side of it, of course; but not to the extent of going below their operating cost, which I have no doubt they do. I am so informed.

Mr. YOUNG. But that would not apply to import goods, would it? That would be helping the foreigner at the expense of the domestic producer.

Mr. KENNEDY. So is the other helping the foreigner at the expense of the domestic producer.

Mr. YOUNG. It is helping the consumer abroad, you mean?

Mr. KENNEDY. In the iron and steel business, of course, we never think of the consumer; we always talk of the producer. That is all we think of.

Mr. YOUNG. But it appears from the testimony we have—I don't know whether this is all to be said on the question—but all the testimony we have shows that on the steel products the foreign consumer pays more than the domestic consumer pays because the freight has to be absorbed; that he actually pays a higher price than our domestic consumer does. All the testimony that we have had indicates that.

Mr. KENNEDY. Well, that has not accorded with my experience exactly.

Mr. YOUNG. A few years ago?

Mr. KENNEDY. A few years ago I bought some billets to go abroad, and I bought some billets for here at home, and I paid $8 a ton more for the ones in this country than for those to go abroad.

Mr. Young. Paid where?

Mr. Kennedy. In Pittsburgh.

Mr. Young. And when you got abroad what was the difference?

Mr. Kennedy. There was still a difference.

Mr. Young. You got those that went abroad cheaper?

Mr. Kennedy. The people abroad got them $3 or $4 a ton cheaper, and at that time they used to get a good many plates that would go over to shipbuilders abroad at about $8 a ton cheaper than they were sold to our people.

Mr. Young. You mean $8 to the mills.

Mr. Kennedy. Yes.

The Chairman. Was not that a little job lot they had, a surplus, or stuff that we would not have in this country?

Mr. Kennedy. Oh, no; not exactly that. We like to talk about that, but, as I remember, a good deal of wire that is sent abroad from this country was made over at Allentown for a good many years, running right in one mill. It was not a case of a few tons being run out on a Saturday afternoon, or something of that kind.

Mr. Bartlett. Was it stuff made in order to keep their mills running during hard times?

Mr. Kennedy. I think you will find the Allentown mills running all the time on export, year in and year out.

The Chairman. What is that—a wire mill?

Mr. Kennedy. Yes.

Mr. Bartlett. For a long time it was denied that was true. I do not speak with reference to steel products particularly, but with reference to other things. It was denied they did sell articles manufactured in this country which had the benefit of a protective tariff cheaper abroad than at home. When it was admitted it was said to be because it was a surplus which they made in order to keep their mills running all the time upon full time; that to throw that surplus on the domestic market would unsettle prices at home; and that having that surplus on hand which they had made because they could not afford to stop their mills and not run them on full time; that having made this surplus, they had nothing else to do with it save sell it abroad; and that they could not sell it abroad except by meeting the prices in the foreign markets at which the foreign manufactured goods were sold.

So I understand you to say that was not true in your case?

Mr. Kennedy. I suppose there were cases where that condition of affairs prevailed, not exactly as you put it in most cases. I suppose in wire goods that might prevail. In the matter of plates they all have to be made to order, and the order would have to be taken in advance. But still there might be plates made very close to shop cost rather than to run the mills slower. That to a certain extent would be legitimate, certainly legitimate so far as the mill is concerned.

Mr. Bartlett. Having purchased, about the same time, orders for domestic consumption and orders for goods to be shipped abroad. do you know about the difference made in price?

Mr. Kennedy. Yes; that was what I was speaking about when I bought a large lot of buildings to go abroad, several thousand tons, and in the same week bought about the equivalent to be erected in this country.

The **Chairman**. Those were bought on specifications?

Mr. **Kennedy**. Yes; the same kind of buildings. The steel was all rolled in the same shop.

Mr. **Bartlett**. Those were the ones you paid $8 less when shipped abroad than you did for domestic use?

Mr. **Kennedy**. Yes; and that was perfectly legitimate from the steel makers' point of view, but it showed a lack of humor on the part of the American people in framing their tariff.

Mr. **Young**. Could that special order you gave have been filled from any cheap lot they had in a shed somewhere, that the American people would not take?

Mr. **Kennedy**. No.

Mr. **Young**. They had to make it to order?

Mr. **Kennedy**. They had to fill the order in some way on the specifications that came in.

Mr. **Young**. Do you know whether that was sold at less than the cost of production, the shop cost, that which you took abroad?

Mr. **Kennedy**. It sold at a very close price; I do not think at less than the shop cost. But I would not be positive about that.

Mr. **Young**. Would you have bought it in this country even if it had been much higher than that? Would you have paid more than that for it?

Mr. **Kennedy**. I judge not much more.

Mr. **Young**. Then it was necessary to make that price in order to sell it, was it?

Mr. **Kennedy**. Well, that was the theory. I do not know that I took any other bids. The proposition was a cheap one, and I do not know that they came into competition.

Mr. **Young**. You think that while it was a close price it covered the price of production?

Mr. **Kennedy**. That is my impression.

Mr. **Young**. The manufacturer was really a little something ahead by doing it?

Mr. **Kennedy**. I think he figured on saving a little on his overhead charges, something of that kind; that he was getting his shop costs and possibly a little more.

Mr. **Young**. Do you think he would have sold goods any cheaper in this country if he had not made that sort of trade to sell goods abroad? Suppose he had refused orders of that kind, would he have sold any cheaper at home?

Mr. **Kennedy**. No.

Mr. **Reed**. Necessarily he would have to charge more at home in order to pay for the overhead charges that the foreign orders would take care of.

Mr. **Kennedy**. No; he would not have had to pay more, because he was charging a good fat profit at home.

The **Chairman**. In other words, he charged at home all the traffic would bear and abroad what he could get?

Mr. **Reed**. What is the difference, Mr. Chairman?

Mr. **Young**. He charged them both what he could get, I suppose, did he not?

Mr. **Kennedy**. I presume so.

The CHAIRMAN. At home he charged what the manufacturers concluded they ought to charge, and abroad he charged what the purchaser would give him and what competition fixed as the price.

Mr. KENNEDY. That is about it.

Mr. YOUNG. It is a very common practice, is it not, not only in large transactions but in small ones, if a trader—a merchant, a manufacturer—can invade territory of some rival manufacturer or merchant, he sells there at less than he sells at home to get the business he is not really entitled to by his situation?

Mr. KENNEDY. Yes; that used to be a pretty common practice. It is not so common a practice in this country between our domestic producers as it used to be.

Mr. YOUNG. The practice is getting better in that respect?

Mr. KENNEDY. Well, it has changed somewhat.

Mr. YOUNG. I notice it even in small things. Since I have been in Washington I have noticed advertisements here of merchants that they would pay customers from Baltimore the fare over here and back if they bought a certain amount of goods. And in Baltimore they have been doing the same thing for Washington customers. My impression was that was very common everywhere.

Mr. BARTLETT. They used to do that in my little town in Georgia.

Mr. YOUNG. I happened to live in a little town of 15,000 people, and there is another town about the same size 3 miles away. I know it is very common there, and I presume the same principle, whether it is right or wrong, is what induced these sales abroad at lower rates. That is it, is it not?

Mr. KENNEDY. That is, to invade other territory?

Mr. YOUNG. Yes. Whatever you get there is so much gain if you make any profit on it at all above your mill costs?

Mr. KENNEDY. Yes; undoubtedly.

Mr. YOUNG. Just one other question I wanted to ask you about transportation. You have spoken very properly about every manufacturer being placed upon an equality with public utilities. We had the other day a representative of the Pennsylvania Railroad before us, and he stated in testifying that the railroad companies had attempted to bring about what he called equality between the Pittsburgh district, the valleys, and the West Virginia district by making rates which would permit the manufacturers in each of those two points to assemble all the material to make, we will say, a ton of pig iron, for the same price.

Now, he did not state whether that corresponded exactly to the actual cost, whether they made as much on one of these transactions as they did on the other, but I assume from what he did say that they did not; that this was done arbitrarily for these industries that existed there at these three points. Do you think that is justifiable or not?

Mr. KENNEDY. I think that is not justifiable.

Mr. YOUNG. That is all.

The CHAIRMAN. Mr. Kennedy, do you know of any country which sells abroad cheaper than at home which has not a protective tariff?

Mr. KENNEDY. Oh, no; of course not; that could not be done.

The CHAIRMAN. Do you know of any country that sells abroad cheaper than at home where the difference between the sale at home and abroad is in excess of the tariff on the articles sold?

Mr. KENNEDY. No.

Mr. YOUNG. Right there. Are you familiar with a publication in London—I can not think of the name of it, but it is the organ of the steel trade. It is a financial paper in which prices are quoted daily on steel products. It is a publication that is known pretty generally.

Mr. KENNEDY. The Iron and Coal Trade Review, is it?

Mr. YOUNG. Perhaps that is it.

Mr. KENNEDY. I get such a paper in my office.

Mr. YOUNG. I have seen it; I don't know whether that is it or not. But in this paper to which I refer there are quotations, export and domestic, right along side of each other, and they almost invariably vary. There seems to be no concealment about it, and that is in free-trade England. Sometimes they vary a good deal and sometimes very little. Sometimes the export price is a little higher than the domestic price, but generally it is lower.

Mr. KENNEDY. It could not vary to any great extent, however.

Mr. YOUNG. But it sometimes varies to a very great extent.

Mr. KENNEDY. How much a ton?

Mr. YOUNG. Several dollars. Of course it is quoted in pounds.

Mr. KENNEDY. I do not understand that, unless there is some difference in the specifications; something of that sort.

Mr. YOUNG. Apparently from the paper there is not. It is the same in the quotations, the price for domestic and the price for export.

I do not quite see, if the merchant in Washington can do it for a customer in Baltimore, why the manufacturer in England could not do it for a customer in South Africa if he chose.

Mr. KENNEDY. Well, he could do it to a certain extent, but I should think not to a very large extent, on large orders, thousands of tons. Of course on small quantities I have no doubt that could be done.

Mr. BARTLETT. You made a remark that was to the effect that the makers of the tariff were lacking in humor. What did you mean by that?

Mr. KENNEDY. Well, so far as the tariff is concerned, I am a believer in a tariff for portection, if the tariff is the question that is under discussion. I believe in a tariff made carefully, and only large enough to grant the necessary protection. I think when it gets to what has been termed a Chinese-wall tariff it is a bad thing for everybody, and a tariff for revenue is an abomination. I think everybody else thinks that who has studied the matter. It has no redeeming purposes at all. It is the same as applied to every other system of indirect taxation. It taxes the wrong people, and the only virtue is they do not know they are being taxed. And when a tariff gets more than enough, like that tariff I mentioned of $40 on tubes, it becomes absurd.

Now, the effect of it, as I have contended for years—I have talked the matter over with Senator Hanna and with Representative Dalzell and with lots of our people as I have met them for years. I have told them and begged of them to use their influence to make the tariff in a business manner and put it just where it ought to be, and get rid of these very exorbitant tariffs, on the ground that if they did not the people would get so sick of them that after awhile they would kick them over altogether and go the other extreme, which

I fear they will do now, and the latter end will be worse than the first.

Mr. DANFORTH. In other words, you believe in information derived from some such commission as the Tariff Board?

Mr. KENNEDY. I don't know about that. We have the information. We know very well about what it is.

Mr. BARTLETT. We have had the information for many years.

Mr. KENNEDY. Yes; but the method is all wrong.

Mr. DANFORTH. Who has the information?

Mr. KENNEDY. We all have the information. We all have the information, but the iron men come down here and holler for $40 a ton when they know they do not need it, and naked selfishness would tell them not to do it. But some of them seem to think the more they have the better, when they know they do not need it. They would take as much as you would give them.

A distinguished Representative in Congress admitted to me at one time that the consideration of the tariff was never taken up as you would sit down and figure with a pencil, but they swap with one another—"Give me a good tariff on pottery, a good tariff on steel rails, and I will work for the sugar tariff," and vice versa. Or a tariff on some article is swapped for a Government building out West.

Mr. DANFORTH. Would you approve the present method of taking up the matter one schedule at a time to taking up the tariff entirely and putting the entire proceeding on business lines?

Mr. KENNEDY. Yes. Then we ought to get the information where we can, but I do not——

Mr. DANFORTH. I mean without information, without hearings, without obtaining any information.

Mr. KENNEDY. Well, the best information, as a general rule, does not come from where you ask for it—that is, the most disinterested information. It is the first rule of those that have studied that sort of thing that the information should not come from the beneficiaries altogether. But it is not a question so much of information. I think the tariff should be revised by getting all the information you can and settling the tariff as nearly correct as you can. But I think there should be no tendency to knock it clear over because it has been too high in the past.

Mr. DANFORTH. I do not think you understood me. I was opposed myself to getting information from those in the trade who were going to be the beneficiaries. I suggested to you, and I understood you to say it was not a wise plan, to obtain it by nonpartisan, disinterested parties.

Mr. KENNEDY. Oh, I think it should be obtained by nonpartisan, disinterested parties, although I do not think it is necessary always to await two or three years for the report of a commission to know whether we ought to have a tariff of 1.95 cents a hundred pounds on sugar higher than No. 16 Dutch standard. In other words, penalizing the bringing in of nice, clean sugar and making everybody refine it. We all know that is crooked and ought to be stopped. It ought to have been stopped years ago. If you had a cargo of sugar out in the harbor, higher than No. 16, whatever it is, Dutch standard, the easiest way for you to get it in would be to take out some black molasses and pollute the sugar, and then bring it in and refine it, and you could save the 1.95 cents over bringing it in straight. You could black that and get it in for 0.95 of a cent, and save the difference between the two. It is exactly like the case of the labor unions that will make you take down a slab of marble, take it out and scarify it, and put it back again.

Mr. DANFORTH. I see you are an expert in other lines than in iron and steel.

Mr. YOUNG. What did you say the difference is, Mr. Kennedy, in the tariff on refined sugar and raw sugar?

Mr. KENNEDY. Have we a tariff here?

Mr. YOUNG. You need not wait to look it up. I understood you to say one was 1.95 cents and the other 0.95 of a cent.

Mr. KENNEDY. That is about right. It is something like that.

Mr. YOUNG. It is considerably different from that, is it not?

Mr. KENNEDY. It may be I am wrong. If I am, I will apologize; but I do not think so. Here it is:

SCHEDULE E.—*Sugar, molasses, and manufactures of.*

216. Sugars not above number sixteen Dutch standard in color, tank bottoms, sirups of cane juice, melada, concentrated melada, concrete and concentrated molasses, testing by the polariscope not above seventy-five degrees, ninety-five one-hundredths of one cent per pound, and for every additional degree shown by the polariscopic test thirty-five one-thousandths of one cent per pound additional, and fractions of a degree in proportion; and on sugar above number sixteen Dutch standard in color, and on all sugar which has gone through a process of refining, one cent and ninety one-hundredths of one cent per pound.

In other words, there is a great big jump for the refining, which is probably cheaper in this country than in any country of the world. Now, the chances are they take off all the farmers' protection because that thing has been running.

The CHAIRMAN. Mr. Kennedy, does the duty of $40 a ton on tubes benefit the trade itself?

Mr. KENNEDY. There is not that much on now. There is only $20. In fact, the tariff on iron and steel is a pretty good tariff at the present time. I have no criticism of the present tariff on iron and steel. I speak of the older tariff.

The CHAIRMAN. But I was speaking abstractly. Do you think a duty of $40 a ton is beneficial to the trade?

Mr. KENNEDY. No; I do not. Any more than a fair protection to anybody is a detriment to the trade.

Mr. DANFORTH. Is the present tariff too high, in your judgment, of $20?

Mr. KENNEDY. No; I think that is not much out of the way.

Mr. BARTLETT. What would be the effect of no duty being put on steel rails at all?

Mr. KENNEDY. I suppose some more steel rails would come in here occasionally, especially on the Pacific coast.

Mr. BARTLETT. You say occasionally. Would it materially affect the manufacturer in the price of steel rails generally in the United States except on the Pacific coast?

Mr. KENNEDY. Well, I don't know; there is not very much on steel rails now. I have forgotten what it is.

Mr. BARTLETT. About $4 a ton, is it not?

Mr. REED. $8 is my recollection.

Mr. KENNEDY. Oh, no; not that much.

The CHAIRMAN. What do you think of a duty of 2 cents a pound on tubes?

Mr. KENNEDY. That is the old duty. I think that was too high.

The CHAIRMAN. What would you think of a duty of 35 per cent ad valorem on tubes?

Mr. KENNEDY. I think that would make it pretty hard sledding for a good many of our tube mills in this country.

The CHAIRMAN. I notice this present tariff has a duty on tubes, of small tubes, of 2 cents a pound. . It then provides:

> That no tubes, pipes, flues, or stays, made of charcoal iron, shall pay a less rate of duty than one and one-half cents per pound; cylindrical or tubular tanks or vessels, for holding gas, liquids, or other material, whether full or empty, thirty per centum ad valorem; flexible metal tubing or hose, not specially provided for in this section, whether covered with wire or other material, or otherwise, including any appliance or attachments affixed thereto, thirty per centum ad valorem; welded cylindrical furnaces, tubes, or flues made from plate metal, and corrugated, ribbed, or otherwise reinforced against collapsing pressure, two cents per pound; all other iron or steel tubes, finished, not specially provided for in this section, thirty per centum ad valorem.

Mr. KENNEDY. I do not know. I am not accustomed much to those duties.

The CHAIRMAN. You have been asked about the value of the Tennessee Coal & Iron Co. Do you know who organized that company, who was at the head of the syndicate, who was the moving spirit?

Mr. REED. You do not mean organized it?

The CHAIRMAN. I mean the company that developed it. I understand for many years the Tennessee Coal & Iron Co. had been poorly handled, that it was no company at all, as Mr. Schwab says.

Mr. KENNEDY. I suppose you are referring to Mr. John W. Gates?

The CHAIRMAN. Yes. Was John W. Gates a capable steel man?

Mr. KENNEDY. He was not a manufacturer; he was a financial man.

The CHAIRMAN. Do you think he had a good idea of the value of steel property?

Mr. KENNEDY. Yes; I should judge he had a good idea of the value of steel properties; he ought to have.

The CHAIRMAN. If John Gates had sworn, and Mr. Schley had sworn, that the plants of that company, at the time it was absorbed, were equal in efficiency to the plants of the Steel Corporation itself, would that have affected your judgment?

Mr. KENNEDY. Equal in efficiency with which?

The CHAIRMAN. Any plant of the Steel Corporation.

Mr. KENNEDY. I would not have believed that.

The CHAIRMAN. If you had known that fact, had heard men that were practical steel men to answer it, how would it have affected your judgment? Would you be inclined to raise, rather than lower, the estimates you have made?

Mr. KENNEDY. If they had sworn the plants that existed there were equal in efficiency to the Steel Corporation plants, I would not believe any man would say that.

The CHAIRMAN. The plant at Ensley?

Mr. KENNEDY. It was not equal in efficiency, at that time, to plants in the North.

The CHAIRMAN. Mr. Schley swore the plant at Ensley was equal in efficiency to any plant of the Steel Corporation.

Mr. Kennedy. Oh, well, Mr. Schley was mistaken. He might have thought so, but it was not. It was a fair plant, but not equal to some of the best of their plants.

The Chairman. If you had heard men who have spent their money swear that this corporation, while paying 4 per cent on its bonds, making a net income of about a million and a half a year, had spent seven or eight million dollars within a very short period in the development of that property, would that have affected your judgment of the value of the property?

Mr. Reed. Won't you add to that that seven or eight million dollars came from syndicate subscriptions and not sales of stock?

The Chairman. Yes. Their earnings went into the same thing.

Mr. Kennedy. I do not know that I grasp that altogether.

The Chairman. If I suppose in my question the fact that this corporation, in addition to the property that I have mentioned, the properties generally known, had very recently, prior to the absorption by the Steel Corporation, spent seven or eight million dollars on this property within two years of the time it was absorbed, would that have affected your judgment as to its value?

Mr. Kennedy. Oh, yes; that would have had a bearing, undoubtedly.

The Chairman. You would have added that amount to the value of the concern if it had been wisely expended?

Mr. Kennedy. Yes; if it had been wisely expended.

The Chairman. If you had known its stock which was sold to the United States Steel Corporation on the basis of 116——

Mr. Reed. 119 and a fraction, figuring the bond worth par.

The Chairman. Figuring they were worth par, I think the Steel Corporation bonds were at 85, which would make it practically a par value, 85 being 15 per cent less than 100 per cent—about 104. If you had heard Mr. Gates swear Mr. Morgan offered Mr. Kessler, who was one of the men in the syndicate, $150 a share on the condition of the corporation ratifying the trade, and he had refused $150.

Mr. Young. I do not think Mr. Gates swore——

The Chairman. I am reading from Mr. Gates's testimony:

> I think Mr. Morgan offered Mr. Kessler, who was one of the men in this syndicate, $150 a share for the stock, conditioned upon the corporation ratifying the trade.

They got 119¾. Mr. Gates also swore, and I am positive about that, that he refused $150.

Mr. Kennedy. Mr. Gates was always a good bluffer, when he was alive.

The Chairman. That is what he swore here. Now, if you had heard Mr. Gates make this statement, how would it affect your idea of the value of that property:

> The Chairman. I was referring to a reported interview which appeared in the hearings before the Senate committee, in which you are reported as saying:
>
> "As to the purchase of the Tennessee Coal, Iron & Railroad Co. by the United States Steel Corporation, the steel men got the best property in the country, and at a bargain price. I regard it as a sacrifice of stock worth a great deal more than the purchase price. I did not want to sell my stock, but had to follow the crowd. Had Tennessee stock been thrown on the market, I would have been better off, as I could have increased my holdings at a low price.

The iron ore and coal deposits of the Tennessee Co. are worth many times more than the entire cost of the property to the Steel Corporation."

Mr. GATES. That I would be willing to make an affidavit to-day, in my opinion; it is purely an opinion.

If you had heard Mr. Gates make that statement what effect would it have had upon your valuation as made here?

Mr. KENNEDY. I can not tell. I suppose I might have been influenced by Mr. Gates's opinion, and by other people's.

The CHAIRMAN. To increase or decrease your valuation, to raise or lower the valuation you made before the committee?

Mr. KENNEDY. I do not know that I would be persuaded to change it either way. Of course, opinions of men who have seen the whole thing would have some weight, of course. But I do not know just how it would affect me. I suppose you gentlemen heard him and could size it up better than I could.

Mr. YOUNG. Do you know Mr. Gates, and know him well?

Mr. KENNEDY. Yes; I know Mr. Gates pretty well. Those things are matters of temperament somewhat, of course.

Mr. DANFORTH. How does he compare as a practical steel man with Mr. Hanna and Mr. Topping? You have said you knew Mr. Hanna.

Mr. KENNEDY. Well, Mr. Hanna is not a practical steel man in the way of operating a steel plant, and neither is Mr. Gates. They are both financial men, interested in these specialties.

Mr. DANFORTH. Mr. Hanna is interested in iron properties and coal properties?

Mr. KENNEDY. Yes. I suppose Mr. Hanna is better acquainted with ores and pig iron than he is with steel, and Mr. Gates probably a little better on steel than on ores and pig iron. But they were both largely in the financial and promoting end of the business. They were not practical men like Mr. Schwab and Mr. Crawford, or those men who are in charge of the making of the steel.

Mr. DANFORTH. Mr. Topping was a practical steel man?

Mr. KENNEDY. Well, he is a financial man—a salesman—practical in regard to knowing prices and that sort of thing.

The CHAIRMAN. My recollection is that Mr. Hanna stated he got his money back.

Mr. BARTLETT. You say Mr. Topping was a practical man in this kind of business?

Mr. KENNEDY. Mr. Topping has been in the steel business for a long time. He is not a superintendent of works; he is more in the financial end of it.

Mr. BARTLETT. Being a practical man of this sort, and familiar with the properties, if he had put his money into this transaction, in purchasing the control of the shares of the Tennessee Coal & Iron Co., and had contributed money for the purpose of improving it, if he and his associates held the stock and spent large sums of money on improving the property very materially, and that as stated, in the condition it then was, although they had this offer of 119½ for the stock in exchange for United States Steel Corporation bonds at 85, that he himself did not think it was a good trade for him to sell it at that, and that neither he nor his associates did sell it, would not you think that would indicate he placed a very considerable value upon this property, both at the time and as to its future value?

Mr. KENNEDY. Yes; I undoubtedly would.

Mr. BARTLETT. That is Mr. Topping's testimony in reference to the property and the view he and his associates had with reference to it. Would not you say that the property was very valuable and would increase in value if kept in repair, and everything of that sort?

Mr. KENNEDY. That would signify he thought it was a very valuable property. And I know that Messrs. Hanna and Oglebay were very enthusiastic over the property, because I had talked with them about it.

Mr. BARTLETT. They did not want to sell the stock when it was sold, and it was only sold under certain and peculiar pressure.

Mr. YOUNG. It appeared that they had the stock, and yet they concluded to sell it at this price, and that there was no pressure on them.

Mr. REED. Mr. Topping had comparatively little stock. He had a high position in the Tennessee Co., and possibly his reluctance to see his associates sell out was affected by the fear he might lose his position.

The CHAIRMAN. As a practical steel man, is it possible to understand how men would prefer not to remain minority stockholders in a company after a majority of the stock had gone out of their control, although they felt they were not getting the full value for that minority stock.

Mr. KENNEDY. No. That often happens, that the minority chooses to go out.

The CHAIRMAN. For instance, the United States Steel Corporation got 51 per cent of the stock of the Bessemer & Lake Erie Railroad. The Pittsburgh, Bessemer & Lake Erie, a road 8 miles long, leased the Bessemer & Lake Erie, and the road leased is valued at $500,000. The minority stockholders get 3 or 4 per cent on their bonds, and I think it is 4 per cent on their stock.

Mr. REED. Six per cent on preferred and 3 per cent on the common.

The CHAIRMAN. Six per cent on preferred and 3 per cent on common, an average of about 4 per cent on their stock, and the 51 per cent stockholders get about 250 per cent.

Mr. REED. Except in the years when the company earns a deficit.

The CHAIRMAN. In the years when they declared it. Of course, that would cover a deficit of a year or two by strict economy. Could not that sort of legerdemain be practiced on minority stockholders of an industrial concern as well as in a railroad?

Mr. KENNEDY. Oh, yes; I suppose it could.

The CHAIRMAN. There is nothing unusual about the fact that when these men, after the control was gained, say they wanted to lead, the hide would go with the tallow?

Mr. KENNEDY. No; nothing unusual.

Mr. YOUNG. If in 1907 you could have been interested in an independent steel company, would you have regarded it as having a tendency to bear the value of the stock, if the Steel Corporation acquired a majority of it?

Mr. KENNEDY. Is that the Tennessee Co.?

Mr. YOUNG. Any company. If you had been a minority holder with other gentlemen you knew in an independent steel company in 1907, would you have deemed that the fact that the Steel Corporation had acquired control of that company was likely to bear the stock and make it worthless?

Mr. KENNEDY. I do not think you could tell about that. I might and might not, depending upon circumstances.

I notice in looking over the record one case of the Frick Coke Co., the majority of whose directors were in the Carnegie Steel Co., and they sold coke at $1.35 over the very bitter protest of Mr. Frick, who stated they were allowing their interest in the steel company to rob him as the minority owner of the Frick Coke Co. That sometimes happens even in pretty large companies.

The CHAIRMAN. Was it not true in that contract they were selling coke at less than the market price? What was the difference between that price and the market price?

Mr. KENNEDY. Yes, very much less.

Mr. YOUNG. When was that?

Mr. KENNEDY. That was a good while ago. At page 4140 of your record, at a meeting of the directors, this resolution was adopted:

> *Resolved*, That the president is hereby directed to render bills for coke to the Carnegie Steel Co. (Ltd.) at a price to be charged by the late chairman, beginning January 1, 1899, in accordance with the terms of the agreement made by him and the board of directors, approved January 10, 1900, namely, $1.35 per net ton at ovens.

Mr. Frick protested very vigorously.

Mr. YOUNG. That was before the Steel Corporation was organized.

Mr. KENNEDY. Before the Steel Corporation was organized, I think. The following then occurred:

> Mr. FRICK. I protest against that resolution because no such contract exists, or was ever made, and because the price named in the resolution is less than one-half the value of the coke, and the members of this board voting for the resolution are using their official positions for the advantage of themselves and of the Carnegie Steel Co. (Ltd.), of which they are members, to the great loss of this company and of its stockholders, especially those who are not members of the Carnegie Steel Co. (Ltd.).
>
> Mr. LYNCH. I wish the secretary to record me as joining in that protest.

They called for the "ayes" and "noes" and the vote was two to four.

The CHAIRMAN. They voted it over on him.

Mr. REED. There is a perfectly adequate remedy for that state of affairs in Pennsylvania.

The CHAIRMAN. Do you know whether the United States Steel Corporation was supererogated to the rights of the Carnegie Co. in this contract by the transfer?

Mr. KENNEDY. No; this was long before.

The CHAIRMAN. Mr. Kennedy, have you anything further to say?

Mr. KENNEDY. There was one statement I wanted to make as bearing on this matter of transportation, that occurs to me in looking over the history of the case. There is a statement here of Mr. Gary having testified December 18, 1908, and in answer to the question as to whether he could put the price down and put other people out of business, Mr. Gary said:

> Quite likely; that may be true. I will not say that it is not true. I will not say that in the competition we could not drive a good many of our competitors out of the business.
>
> Mr. CLARK. Now, another thing.
>
> Mr. GARY. It is not because of a hold on the market.
>
> Mr. CLARK. What is it, then?

Mr. GARY. It is because of our ability to produce cheaper and because of our ownership in the independent concerns, such as the railroads, the steamship lines, etc., which gives a large credit from the United States Steel Corporation's standpoint.

Showing that transportation lines, in Mr. Gary's opinion, are important factors.

Mr. BARTLETT. That is from the tariff hearings in 1908?

Mr. KENNEDY. Yes, sir.

The CHAIRMAN. As I understand it, you are of the opinion, if by any method we could force the common carriers of the country to treat all industrials exactly alike, the advantage of the Steel Corporation over its competitors would be practically eliminated?

Mr. KENNEDY. To a great extent. I think Mr. Gary has always been very reasonable and very honest to his competitors, but some other man in the future, some other king might rise who knew not Joseph, and it would really be better that no one company had as large an inside hold on the others.

The CHAIRMAN. If the Steel Corporation chose to do it, with its present weapons, could it destroy its competitors?

Mr. KENNEDY. I think it could; yes.

The CHAIRMAN. Mr. Kennedy, the committee is deeply grateful to you for your very kind appearance and valuable testimony.

Thereupon, at 1.45 o'clock p. m., the committee adjourned until tomorrow, Friday, March 29, 1912, at 10.30 o'clock a. m.

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No. 59

UNITED STATES STEEL CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

FRIDAY, MARCH 29, 1912

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

UNITED STATES STEEL CORPORATION.

Committee on Investigation of the
United States Steel Corporation,
House of Representatives,
Washington, D. C., Friday, March 29, 1912.

The committee this day met, Hon. Augustus O. Stanley (chairman) presiding.

The Chairman. The committee will be in order.

Mr. Reed. Mr. Chairman, yesterday you asked me how many blast furnaces there were at the Sharon Steel Works. I find now there were three at the Sharon Steel Works and at the Donora Steel Works there are two. At both of those plants blast furnaces were not completed at the time the Union Steel Co. was taken over by the Steel Corporation. At that time Sharon's actual production was nothing in pig iron, and there was one furnace operating at Donora.

The Chairman. Mr. Stenographer, at the conclusion of this hearing you may insert in the record and have printed the last annual report submitted to the Committee of the United States Steel Corporation for the purpose of reference. I think that will be a good idea.

Mr. Bartlett. The one received in the mail the other day?

The Chairman. Yes.

Mr. Young. The 1911 report, you mean Mr. Chairman?

The Chairman. Yes; the last one will be better. It gives a good deal of detailed information that may be of value to us.

Mr. Sterling. When did that come out?

Mr. Reed. Last week, I think.

The Chairman. Mr. Munsey, you may be sworn.

STATEMENT OF MR. FRANK A. MUNSEY.

The witness was sworn by the chairman.

The Chairman. Mr. Munsey, there has been considerable discussion of an article which appeared in Munsey's Magazine of——

Mr. Munsey (interposing). June, 1908?

The Chairman. Yes; of June, 1908, written by Frank A. Munsey. Are you the author of that article?

Mr. Munsey. I am.

The Chairman. This article purports to have been written on April 27. Is that correct?

Mr. Munsey. Finished on that date; yes.

The Chairman. This article, on page 364, contains this statement:

> We should not have the article ready even now but for the courtesy and assistance of the Steel Corporation. Indeed, without this courtesy it would not have been possible to get the facts and figures in this compilation—to get facts and figures worth while—a compilation which shows $1,782,000,000 worth of property. The following is the inventory.

I will ask you to explain to what extent the Steel Corporation extended its courtesy to you in making this elaborate report?

Mr. Munsey. It furnished me the figures.

The Chairman. That are contained in this article?

Mr. Munsey. Yes, sir.

The Chairman. Did you take these from their books?

Mr. Munsey. No.

The Chairman. They just furnished you the statements showing these figures?

Mr. Munsey. They just furnished me the statements showing these figures; yes.

The Chairman. On page 368 I find in this article the following:

> If other big corporations and important railroads will show us a similar courtesy and give us a similar amount of help in working up an inventory of their properties, we shall follow this article with other articles of like nature. Nothing can be of greater service to the investor in securities than accurate information of this kind about the great railroads and great corporations whose stocks and bonds occupy so big a place in the financial interests of America, and, in fact, the financial interests of the whole world.
>
> Assuming that this inventory of the Steel Corporation is reasonably accurate, it makes a wonderful showing for the company—a showing of more than $300,000,000 in assets in excess of the total capitalization of the concern in both stocks and bonds at par value; and, figured at the price at which these stocks and bonds are now selling, the assets exceed the total capitalization by over $600,000,000.

Did you reach that conclusion from a careful examination of the statements furnished you by the Steel Corporation?

Mr. Munsey. From the statements; yes, sir; from the figures as they are stated there.

The Chairman. Had you any other data at the time you started to write this article or any opinion other than that obtained from this data?

Mr. Munsey. I talked with a great many men familiar with steel properties, financial matters, and the use of steel, the probable use of steel, and everything that would bear or have any bearing upon the value of the property of that kind and its outworking.

The Chairman. Did you obtain from any other source data as to the tonnage or output or value of the Steel Corporation properties except from the Steel Corporation itself?

Mr. Munsey. I did not.

The Chairman. This article——

Mr. Bartlett (interposing). And you published them as you got them from them?

Mr. Munsey. I can not say that I published them absolutely accurately as I got them from them, but I published them substantially, I think, as I got them from them.

Mr. Bartlett. They knew the purpose for which you wanted to use them?

Mr. MUNSEY. Yes. It would have been quite impossible for a magazine man to go into an organization like that and get any estimate without getting it from the inside.

The CHAIRMAN. I see. This article, as you say, was completed in April and published in June?

Mr. MUNSEY. Yes.

The CHAIRMAN. Why did you publish it so long after finishing it?

Mr. MUNSEY. We publish the June number—we issue it on the 20th of May. It takes about a month to get a magazine article into type and get it through the great edition that we have to print. We usually allow about a month as the shortest time.

The CHAIRMAN. During that time what persons interested in the Steel Corporation had an opportunity to examine your manuscript?

Mr. MUNSEY. I do not think anyone did.

The CHAIRMAN. Was not this manuscript shown to Judge Reed?

Mr. MUNSEY. No; not to my knowledge.

The CHAIRMAN. Was it not submitted to Judge Gary?

Mr. MUNSEY. Who is Judge Reed?

The CHAIRMAN. A director of the Steel Corporation.

Mr. MUNSEY. Not to my knowledge. I have no belief that it was.

The CHAIRMAN. Was it not submitted to Judge Gary?

Mr. MUNSEY. I do not think so.

The CHAIRMAN. Did not any member of the Steel Corporation express their approval or disapproval of this work prior to the time it was given to the public?

Mr. MUNSEY. Not to my knowledge, other than the facts or the figures, and the facts and figures I got from them.

Mr. BARTLETT. Did they, after it was published in the magazine, make any suggestion to you that it was inaccurate in any way?

Mr. MUNSEY. No.

Mr. BARTLETT. Any officer of the Steel Corporation?

Mr. MUNSEY. No.

Mr. BARTLETT. Have you since that time ever received any suggestion from them that the information you conveyed to the public in this article was inaccurate?

Mr. MUNSEY. No. I would like to say I recollect no such information.

Mr. BARTLETT. Sir?

Mr. MUNSEY. I recollect no such statement.

Mr. BARTLETT. If a magazine with a circulation such as your magazine has prints an article with reference to the business of a large corporation or any corporation or man, and would make an inaccurate statement, it would be the policy of the paper to correct inaccuracies if their attention were called to any such?

Mr. MUNSEY. If they were serious; yes.

Mr. BARTLETT. That is what I mean.

Mr. MUNSEY. Yes.

Mr. BARTLETT. Have there been instances where statements have been corrected?

Mr. MUNSEY. There have been times—very infrequently, because we try to be pretty accurate.

Mr. BARTLETT. I apprehend anyone might make an inaccurate statement, no matter how careful they would be?

Mr. MUNSEY. Yes.

Mr. BARTLETT. It is understood if this article was not substantially correct in its material statements, your attention would have been called to it in all probability?

Mr. REED. Understood by whom?

Mr. BARTLETT. I assume if you did not believe—I will put it that way—that if the article was inaccurate in any substantial——

Mr. MUNSEY (interrupting). Grossly inaccurate, would you say?

Mr. BARTLETT. I would not say grossly inaccurate, because things might be inaccurate and not be grossly inaccurate. In other words, if you had done the Steel Corporation an injustice in the matter of stating matters which you did state, is it not likely your attention would have been called to it for the purpose of correction so the public might not get the wrong impression from what you wrote?

Mr. MUNSEY. I do not know what the policy of the Steel Corporation would be, but I can fancy that if a thing were grossly inaccurate, as to the policy of the Steel Corporation, the management of the Steel Corporation would have told me so.

Mr. BARTLETT. This article holds out, so far as the statement of statistics is concerned, and what they own and the value of these properties, as being virtually furnished you by the Steel Corporation?

Mr. MUNSEY. That is right.

Mr. BARTLETT. If that statement was not correct, do you not believe the inaccuracies, whether gross or otherwise, would have been corrected?

Mr. MUNSEY. I should think if they had been slight, perhaps nothing would have been said about it. If they had been gross, something would have been said about it.

The CHAIRMAN. Suppose you made a mistake in estimating one of the properties, say, of only about sixty or seventy million dollars, do you think they would have said anything about it?

Mr. MUNSEY. Are you referring now, Mr. Stanley, to my own editorial comment or to the statement of the assets of the company?

Mr. REED. Would it not be better, Mr. Chairman, to direct Mr. Munsey's attention to the particular figures which you have in mind?

The CHAIRMAN. I have no particular figures in mind. I am just asking, for instance, to get an idea of what he considers a slight inaccuracy.

Mr. MUNSEY. Perhaps I can help you a little, if I may. The inventory as set forth in that article is represented in the figures—not the figures in what I may call the editorial side light. The figures in that inventory represent the one million seven hundred thousand——

The CHAIRMAN (interrupting). I will take the inventory. Have you one of those magazines containing the article there before you?

Mr. MUNSEY. I have one here.

The CHAIRMAN. Turn to page 364. I will take the inventory or tabulated statement where it is just a mere matter of addition and subtraction. At the bottom of page 364 you start with something that looks to me like a balance.

Mr. MUNSEY. Ore and mining timber properties?

The CHAIRMAN. Yes, sir. That reads as follows:

> Unmined ores located in the Lake Superior districts on the Marquette, Menominee, Gogebic, Vermillion, and Mesabi iron ranges, and in the Baraboo district, Wisconsin, in all an estimated tonnage of 1,182,815,200 tons of all grades, exclusive of the Great Northern ores.

Where did you get that figure of 1,182,815,200?

Mr. MUNSEY. At 60 cents per ton——

The CHAIRMAN. I am not asking about that. I am talking about the number of tons.

Mr. MUNSEY. The tonnage I got from the Steel Corporation.

The CHAIRMAN. Now, then, are you a geologist, Mr. Munsey?

Mr. MUNSEY. I am not.

The CHAIRMAN. Or a mining expert?

Mr. MUNSEY. I know nothing about it.

The CHAIRMAN. Where did you get that idea that it was worth 60 cents a ton?

Mr. MUNSEY. I got that from talking to people generally.

The CHAIRMAN. Did you talk to the Steel Corporation about what you thought the ore was worth?

Mr. MUNSEY. I talked with a great many people. I talked with Mr. Schwab and a great many other people.

The CHAIRMAN. Was Mr. Schwab at that time identified with the United States Steel Corporation?

Mr. MUNSEY. No; he was not.

The CHAIRMAN. Did anybody in the Steel Corporation, or did you find any data in the Steel Corporation's books touching what that ore was worth?

Mr. MUNSEY. I don't remember that directly. I don't know that they placed a valuation on that ore.

The CHAIRMAN. Let me have your last report.

Paper handed to chairman by Mr. Reed.

The CHAIRMAN. Did you examine their reports, Mr. Munsey?

Mr. MUNSEY. I suppose perhaps I did at the time.

Mr. REED. I think the only place that would appear would be in the general balance sheet mingled in with the property account.

The CHAIRMAN. Well, you say you found nothing in the Steel Corporation's books or nothing in their accounts, nothing in conversation with them to give you any idea?

Mr. MUNSEY. I never saw their books.

The CHAIRMAN (continuing). To give you any idea as to what that ore was worth?

Mr. MUNSEY. I presume I did have, but I don't know just what figures they gave me. After getting your summons to come over here I looked up to see if I had any original data from which the article was made up, but I find it has all been destroyed, as is our custom, after a magazine article has gone to press.

The CHAIRMAN. This one item of $709,000,000 is practically one-half of the total valuation that you placed on the ore properties, is it not—on the entire property, is it not?

Mr. MUNSEY. I think the entire property is something like——

Mr. REED. One billion four hundred million.

The CHAIRMAN. The capitalization is one billion four hundred and what, at the time of this article?

Mr. REED. About fourteen hundred million.

The CHAIRMAN. About fourteen hundred million?

Mr. REED. Yes.

The CHAIRMAN. At the time of the organization it was fourteen hundred million capitalization, and this would be about half of that sum. Now, take the mining plants, improvements, and development work in active mines——

Mr. BEALL. You did fix this value at 60 cents a ton, Mr. Munsey?

Mr. MUNSEY. I think so.

Mr. BEALL. You did that after investigation?

Mr. MUNSEY. I talked with a great many people, as a man is wont to do when he writes an article for a magazine.

Mr. BEALL. You wanted to have the article correctly represent the value of these different properties?

Mr. MUNSEY. Yes.

Mr. BEALL. And you availed yourself of every opportunity and of every source, did you, that was available?

Mr. MUNSEY. Yes.

Mr. BEALL. To get accurate information on this subject?

Mr. MUNSEY. To get opinions—to get accurate information and opinions from these different sources, and from what information I could get to make up my own opinion.

Mr. BEALL. And you made up your opinion upon that basis?

Mr. MUNSEY. I did.

Mr. BEALL. Having recourse to every reasonable source of information that was available?

Mr. MUNSEY. Yes.

Mr. BEALL. And after doing that, you reached the conclusion that 60 cents per ton was a reasonable estimate of the value of the ores owned by the United States Steel Corporation?

Mr. MUNSEY. Yes; and I will tell you, if I may, a fact that had great influence with me in my decision. That was the price fixed upon between Mr. Hill—Mr. J. J. Hill—and the United States Steel Corporation for its ores. On the basis of that price, 60 cents a ton for this ore looked cheap; looked an undervaluation.

Mr. BEALL. Yes. You took into consideration the different character of ores owned by the Steel Corporation?

Mr. MUNSEY. I was told that this ore owned by the Steel Corporation was a better average than that of the Hill ores. That was the general impression I gathered from discussing——

The CHAIRMAN. The Hill ores have to be, great quantities of them, necessarily concentrated, do they not?

Mr. MUNSEY. I don't know as to the details.

The CHAIRMAN. Did you get any data on that subject?

Mr. MUNSEY. Oh, that is four or five or six years ago. I know I talked—in an effort to get up an honest article, I got information from all sources that I could. I did not confine myself to the Steel Corporation alone, but I talked to people outside.

The CHAIRMAN. Did you talk with financiers?

Mr. MUNSEY. I talked with financiers, steel men, engineers——

The CHAIRMAN. Did you ever talk with any financiers about the reason for the Hill lease?

Mr. MUNSEY. No.

The CHAIRMAN. Or did any financiers ever intimate to you that the Hill lease and the Hill roads were the only available outlet for ores from the Superior district, except the roads controlled by the United States Steel Corporation?

Mr. MUNSEY. I don't recall any such conversation as that or such information.

The CHAIRMAN. Did you ever get any information from financiers or from the Steel Corporation or from anybody else that the ores controlled by the Hill people were practically all the available ores in the Lake Superior region not held by some great steel concern, except probably some 5 or 6 per cent?

Mr. MUNSEY. I don't know that I got that expression directly from anybody, but I think that thought was general in New York.

The CHAIRMAN. Well, did you take that into consideration in fixing the value of this ore at 60 cents per ton?

Mr. MUNSEY. I should say that I took into consideration more the statement of men like Mr. Schwab and other steel men, and was particularly influenced by the price fixed for the Hill ores. I think that was the dominating thought in my mind in fixing upon a value for these ores.

The CHAIRMAN. Now, what value did you put on the southern ores, Mr. Munsey?

Mr. MUNSEY. The Tennessee Coal & Iron?

The CHAIRMAN. Yes.

Mr. MUNSEY. That did not enter into the inventory figures at all. That is what I—what I said about that I might term, after the inventory was in, a side-light editorial expression. That is not made up in the one billion seven hundred million of assets at all.

Mr. YOUNG. Tennessee Coal & Iron is in here at $50,000,000 in this inventory?

Mr. MUNSEY. Yes; but I mean to say the price I figured of 15 cents a ton for the ore down there——

Mr. YOUNG. That was your estimate?

Mr. MUNSEY. Yes; that was my estimate, as an editorial side light.

The CHAIRMAN. That editorial from a great magazine, over the signature of a great editor, was calculated to impress this committee more perhaps than the figures of a mere corporation, because corporations do things as corporations—not the Steel Corporation, I am not referring to that particularly—but every corporation is inclined to do things as a corporation, in my opinion, which the incorporators would sometimes hesitate to do as individuals.

Mr. MUNSEY. I understand that.

The CHAIRMAN. I believe that is generally true.

Mr. MUNSEY. Yes.

The CHAIRMAN. And a statement made editorially upon the authority of the editor and over his signature, I assume, would receive more careful consideration than the mere copying of an inventory from the books of a steel-making concern?

Mr. MUNSEY. Yes.

The CHAIRMAN. I presume you prepared that editorial, dealing with properties of this vast value and this immense importance to the public generally, with great care?

Mr. MUNSEY. I did. I am perfectly willing to stand for the statement to-day as uttered from that period.

The CHAIRMAN. Now, upon what did you base your conclusion? It is not as high-grade ore as the northern ore, but assuming it is worth 15 cents per ton, it alone would amount to $105,000,000. Now, upon what did you base your theory that these low-grade ores down here—way down in Birmingham, away from civilization almost, as we have been told—I don't think we would put it that strong, but I say that is the idea some people seem to have.

Mr. BARTLETT. Oh, no; they are talking about making a ma president from that very district.

The CHAIRMAN (continuing). Were 15 cents a ton?

Mr. MUNSEY. How I reached that conclusion?

The CHAIRMAN. Yes.

Mr. MUNSEY. I reached that conclusion from many conversations I had with people who were familiar with the probable amount of ore down there, men who had been connected with the Tennessee Coal & Iron Co., and particularly from the price arranged between Jim Hill—I won't say "Jim Hill," but I will say Mr. Hill—and the Steel Corporation. I reached it from another point of view. That was an optimistic period in our history when that was written. The year before that, or approximately a year before that, Mr. J. J. Hill said that we must have or should have $5,000,000,000 with which to enlarge our railroad systems—double-track our roads and reequip them. In that period of optimism it looked like an enormous quantity—it looked as if an enormous quantity of steel would be used in the upbuilding of these railroads, and the larger amount of steel used the more value that had. Of course, I did not arbitrarily fix upon 15 cents a ton alone, without the opinion of outside men with whom I talked about that property, and I should like to record right here that so far as the Steel Corporation is concerned, I had no other estimate of its value than the $50,000,000 which was included in the inventory.

The CHAIRMAN. Well, did you ever intimate to any person connected with the Steel Corporation—ever discuss with them the statements that you have made in this article, outside of the mere data that you copied?

Mr. MUNSEY. No; I have never discussed that in any way with the Steel Corporation—any specific item in the article.

The CHAIRMAN. I am not speaking of specific items now. I mean before writing this thing, did you talk—I understood with Mr. Schwab. Now, who else did you talk to about the properties in general? You discussed very elaborately their values and location and output and all that sort of thing.

Mr. MUNSEY. I talked with a good many men. I could not remember all. I talked with Mr. Schwab. I talked with Mr. John Gates. I talked either directly or indirectly with Mr. Topping, and I had men see other men.

The CHAIRMAN. Well, did you write about the Steel Corporation and discuss matters concerning the iron industry generally with people outside of the Steel Corporation only?

Mr. MUNSEY. The Tennessee property?

The CHAIRMAN. I am not talking about the Tennessee property. I am talking about all these properties; about the values of ores generally. Whom did you discuss that with?

Mr. MUNSEY. I discussed that with a great many people.

The CHAIRMAN. Who in the Steel Corporation besides Mr. Schwab?

Mr. REED. Mr. Schwab was not in the Steel Corporation at that time.

Mr. MUNSEY. I can not tell you.

The CHAIRMAN. Mr. Gailey is a great expert on ore. Did you talk with Mr. Gailey?

Mr. MUNSEY. Not to my knowledge.

The CHAIRMAN. Now, when these people turned their books over to you——

Mr. YOUNG. I do not understand they did that, Mr. Chairman.

The CHAIRMAN. Well, I mean when they furnished you this information their books—this elaborate information you speak of——

Mr. MUNSEY. Yes.

The CHAIRMAN. Now, did they furnish you any information—for instance, the information they furnished us here—pages of it on the subject of their ores, giving the name, extent, range, and whether freehold or leasehold, of all their mines—did they furnish you any information anything like that in dealing with this $800,000,000 worth of property?

Mr. MUNSEY. No; they furnished me the information substantially as I have it there, but not necessarily all the figures, the same.

The CHAIRMAN. Did they simply furnish you with the number of tons, without furnishing you any guide to make use of in tabulating these figures and discussing it with the public generally?

Mr. MUNSEY. I can not remember how that was arrived at.

Mr. BARTLETT. Take, for instance, this very first item in the inventory, in this article, "Ore and mining-timber properties in the Lake Superior district," etc., on the Marquette, Menominee, etc., ranges in Wisconsin, in all estimated tonnage $709,689,120, estimated at 60 cents a ton; where did you get the estimated tonnage?

Mr. MUNSEY. I got the tonnage from the Steel Corporation.

Mr. BARTLETT. They furnished you that?

Mr. MUNSEY. Yes.

Mr. BARTLETT. Now, where did you get the price at which you fixed it—60 cents a ton?

Mr. MUNSEY. I think I arrived at that conclusion from the general discussion with other people.

Mr. BARTLETT. Well, now, further on you say that Mr. Schwab is a good authority on the value of ore, and that he said to you two or three days ago—that was prior to the issue of this—that the ore holdings of the Steel Corporation were easily worth $1 a ton, and in fact might safely and conservatively be regarded as worth still more, for the reason that they can not be duplicated. Do you remember that statement?

Mr. MUNSEY. I am sure it is so, if it is in the article.

Mr. BARTLETT. Well, it is in the article, and further on you say:

> No account has been taken of it, though it is of immense value to the Steel Corporation. It is not only an insurance against competition, but it makes certain a longer period of easily obtained ore. One of the directors of the Steel Corporation, who is a very big man in the financial world, said to me yesterday that he thought this contract worth $500,000,000 to the Steel Corporation, and that if an offer of that kind were made for it he should vote against the sale. Whether this estimate of its value is excessive is problematical. His judgment, however, is usually very sound.

Do you not recall who that was?

Mr. MUNSEY. I do.

Mr. BARTLETT. Who was it?

Mr. MUNSEY. Do I have to answer that?

The CHAIRMAN. Yes; I think that is entirely proper.

Mr. **Munsey**. I ask the question, because that was a private conversation between a gentleman in New York and myself, and it might make some discussion——

Mr. **Bartlett**. Well, as far as I am concerned, Mr. Chairman, I do not care, except——

The **Chairman**. That was a private conversation which you placed in a public magazine. If it had been a private conversation, and you had heard it in a club, and Mr. Morgan, for instance, talked to you about the value of his property, I should certainly not ask you to reveal the identity of that person.

Mr. **Munsey**. Well, that was the nature of it.

The **Chairman**. But if you put in a public magazine a statement of that kind, then the author becomes highly pertinent.

Mr. **Bartlett**. I would not have asked, except he stated he was a director in the Steel Corporation, and it is probably worth something for that reason; that a business man who was interested in it made that statement.

Mr. **Munsey**. Well, you see, that is a very large board of men. They differ, I presume, the same as any other board differs in their estimates of value.

Mr. **Bartlett**. Of course, I do not mean to say that a casual remark by an officer of a corporation would bind them.

Mr. **Munsey**. That is what this was, a casual remark to me.

Mr. **Bartlett**. I ask for the name, because we have not found out who he is or where he is or how we can subpœna him here. I don't know whether he has been on the stand or not. Do you know whether he has been on the stand before the committee?

Mr. **Munsey**. I do not.

The **Chairman**. It has been repeatedly held that where a witness makes a statement on the stand, that it is always proper to ask him for his authority. I will give you an illustration. A gentleman came on the stand and testified about a list of employees who had been discharged, and said that the list came to him in the strictest confidence, and that he being an editor and it coming to him confidentially that he would betray his employer, in a way, if he divulged the author of his information. I held—the chair held that under those circumstances he would hesitate to ask for the information, in the nature of the masonry of the press. Mr. Gardner strenuously objected that I should allow a statement of that kind be made and not get the name of the author, and I agreed with Mr. Gardner as perhaps carrying the courtesy too far, and we got the sense of the committee, and the sense of the committee was that he was right, and I think he was right. It has been uniformly held here, where a statement of that kind is made, that the committee is entitled to the author of the statement.

Mr. **Munsey**. You see, if I had not—if I had not felt that that was a conversation, a private conversation, between the gentleman referred to and myself, and I had thought he was perfectly willing to have his name published, I could have given strength of the article by publishing it.

Mr. **Bartlett**. That is the reason I asked the question. If this article is challenged upon the ground of inaccuracy, then the source upon which you base a material statement that a contract was worth $500,000,000 to the Steel Corporation, and that if an offer of that kind were made for it he would vote against the sale—that would be something to sustain your statement.

Mr. MUNSEY. I will tell you how I feel about that. If I were talking with a friend of mine and I was speaking without the most careful consideration of my words, but what I thought in a general way was the fact, I should regret very much if it were published, because it would not have been said with that view—with any view to publication.

The CHAIRMAN. The director will understand that and thoroughly appreciate that it is your misfortune and not your fault.

Mr. MUNSEY. I am entirely in your hands, gentlemen.

The CHAIRMAN. I think the question should be answered. We will take the sense of the committee, however.

Mr. YOUNG. This is not a matter which can possibly reflect on the character of your informant. It would only reflect on his judgment, at any rate.

Mr. MUNSEY. It is only in the sense that I regret bringing the man's name in and making it a question of controversy or unpleasantness.

Mr. BARTLETT. By this article you have put the public upon notice with the information in the article of the value of this property, and by reason of the fact that you have made this investigation and written this article it has caused the committee to inquire of you the sources of your information upon which you based the article. Now, it is a question before this committee as to what the value of these properties are, and that is the reason you are here. Now, in order that we may ascertain the value of the article, we ought to have the sources of the information upon which you predicated so important a statement. That is the reason I ask the question.

Mr. MUNSEY. Is it your wish that I answer the question?

The CHAIRMAN. Yes.

Mr. MUNSEY. Mr. George F. Baker.

Mr. BARTLETT. President of the First National Bank?

Mr. MUNSEY. He is not president now. He is chairman of the board, I think.

The CHAIRMAN. Ordinarily I would not insist, Mr. Munsey, but this article, you understand, is a matter of great weight with this committee. We find gentlemen of the most exalted position in political and journalistic work differing very radically, and, for my part, as chairman of this committee, I feel the greatest respect for the judgment of the gentlemen who hold that it is comparatively worthless, and also the greatest respect for the gentlemen who hold that it is worth hundreds of millions, and in choosing between the editor of Munsey's Magazine and an ex-President of the United States, where they differ so sharply, I am anxious to get all the facts possible.

Mr. REED. That was just Mr. Baker's personal opinion, of course?

Mr. MUNSEY. Yes.

Mr. REED. And expressed as such?

Mr. MUNSEY. Yes.

Mr. BARTLETT. Mr. Baker is at present a member of one of the finance committees of the Steel Corporation?

Mr. MUNSEY. I don't know.

Mr. Bartlett. It is so published in this report. Mr. Gary chairman, and Mr. Baker is the first man on one of the committees the Steel Corporation at the present time.

Mr. Young. Mr. Baker did not claim to be an expert on iron ore or to have anything except the general knowledge a New Yor financier might have?

Mr. Munsey. Entirely so; and he was speaking to me as one ma speaks to another in the club.

The Chairman. I see you state here: "You will observe that th contract for the Great Northern ores has not been listed as an asse in this inventory. No account has been taken of it, though it is o immense value to the Steel Corporation. It is not only an insuranc against competition, but it makes certain a longer period of easil obtained ore." Now, when you were discussing this matter with M Baker, were you discussing the period at which the ores of the Stee Corporation would probably be exhausted, or were you discussing it value as an insurance against competition, or both?

Mr. Munsey. I do not recall that I had any discussion with Mr Baker about that, in that way, but I know I have heard many con versations as to the period in which the ores—the good ores of th country, the easily obtainable ores of the country—would be ex hausted.

The Chairman. When did these people, these Steel Corporatio people, consider that these ores would be exhausted?

Mr. Munsey. I don't remember that period.

The Chairman. I shall not ask you for the name of anybody yo talked to. It is only where you mentioned it was a director.

Mr. Munsey. Well; but I don't remember.

The Chairman. Well, where did you get this idea that it was a insurance against competition? In what way was the Hill lease a insurance against competition? How did they reach that conclusion? How did you reach it from talking?

Mr. Munsey. I reached that conclusion from the fact that the ore were being used up very rapidly, and from the general conversatio as to the time and period that those ores would be exhausted.

The Chairman. Well, do you remember about what was the consumption of ore at the time this article was written?

Mr. Munsey. No; I know nothing about that.

The Chairman. Well, it was—I don't recall the years—but not i excess of (it has doubled in 10 years, I think)—not in excess o 30,000,000 tons a year, was it, the total consumption in 1898?

Mr. Sterling. 1908.

Mr. Reed. The total consumption in 1908 was 25,000,000 from the Superior region. In 1907 it was 42,000,000.

The Chairman. 1908, I am asking.

Mr. Reed. 1907, 42,000,000; 1908, 25,000,000.

The Chairman. That will give an average of about 30,000,000.

Mr. Reed. The average is considerably more than that. Twenty-five million is considerably below the average.

The Chairman. Yes; and 1907 was an unusual year and above the average. Now, taking the Steel Corporation's ore at one-half of it 15,000,000 tons a year at that time—now, you had 1,800,000,000 tons

Mr. Reed. Where do you get 1,800,000,000?

The Chairman. One billion eight hundred million tons of all grade of ore. Great Northern ore is excepted, according to his figures.

Mr. Young. That was the holding of the steel corporation?

The Chairman. Yes.

Mr. Reed. One billion one hundred and eighty-two million.

The Chairman. That is what I said. Using 15,000,000 tons annually, that would be, roughly speaking, 100,000,000 tons would last them six years. They had over 100 years' supply on the Lake Superior ores alone, did they not?

Mr. Reed. Provided the panic continued for 60 years.

The Chairman. Well, there was no panic in 1908, was there?

Mr. Reed. I seem to remember there was.

The Chairman. In 1907 there was one. It was very short and decisive; it was a bankers' panic, and it comes quick and goes quick, like the colic. I am taking the average between the best year you had in Superior and the worst one. What was the consumption of ore for 1909?

Mr. Reed. The Lake Superior production of ore in 1909 was 42,900,000.

The Chairman. How much did you use? What was the consumption by the Steel Corporation?

Mr. Reed. Its production of pig iron was about 44 per cent of the country's production.

The Chairman. And you were not entirely confined to this ore. You rarely ever exceed 15,000,000 tons from the Lake Superior region?

Mr. Young. Oh, yes.

Mr. Reed. Twenty million would be a very fair average.

Mr. Munsey. But with an increasing population and an increasing demand for steel wouldn't that ore disappear much more rapidly than it had been disappearing on the average?

The Chairman. Well, in your elaborate study of ore did you come to the conclusion that all the ore on the continent had been discovered?

Mr. Munsey. I would not say I made an elaborate study of it.

The Chairman. Well, in your elaborate discussion or investigation that was not elaborate did you come to that conclusion?

Mr. Munsey. I came to the conclusion that it was a very important thing—that raw materials were a very important thing.

The Chairman. I quite agree with you.

Mr. Munsey. To any manufacturing concern.

The Chairman. But you would not lay it down as a basis for any conclusion with reference to ore that you would consider the ever-increasing capacity for consumption by the people in this country and would not consider, at the same time, any possibility of the development of any future mines?

Mr. Munsey. Oh, yes; I think that should be taken into consideration. The best answer to all that, to my mind, was the contract made with Mr. James J. Hill for that ore. That is a technical thing of which I know nothing.

The Chairman. Now, taking that as a basis, you place the ores of the Tennessee Coal & Iron at an average of 15 cents a ton?

Mr. Munsey. Yes.

The CHAIRMAN. You used the same reasoning and the same basic facts in coming to this conclusion that you did in coming to the conclusion that the ores of the Steel Corporation were worth 40 cents a ton?

Mr. MUNSEY. I did not get the same facts. I did not get any facts from the United States Steel Corporation as to the various phases of its property. It was lumped; it was put in at $50,000,000.

The CHAIRMAN. I am not speaking about that. I am talking now about the facts in your possession from which you reached certain conclusions. Mr. Hill did not place any—did you talk with Mr. Hill?

Mr. MUNSEY. No; not about that.

The CHAIRMAN. Well, neither Mr. Hill nor any person connected with the Steel Corporation——

Mr. MUNSEY. No.

The CHAIRMAN. Nor even Mr. Schwab himself said to you that these ores are worth 60 cents a ton—the Superior ore?

Mr. MUNSEY. I think the statement says there that Mr. Schwab said they were worth $1 a ton.

The CHAIRMAN. Yes. You took the statements of Mr. Schwab, the Hill ore lease, the amount or ores available, as you mentioned here, and all of these other facts, and from those facts——

Mr. MUNSEY. Made up an estimate.

The CHAIRMAN. Made up an estimate that they were worth 60 cents a ton?

Mr. MUNSEY. Yes.

The CHAIRMAN. You had the same facts, the same quantity of ore available, the same consumption, the same market, the same ownership, the same process of manufacture when you came to the conclusion that the Tennessee Co.'s ores were worth 15 cents a ton?

Mr. MUNSEY. In some respects the same, but not absolutely. The Steel Corporation gave me the actual tonnage in this, 1,182,000,000, or something like that, of their estimate. The estimate as to the amount of coal and ore—ore properties of the Tennessee Coal & Iron Co. I got wherever I could. I had to get that from outside sources.

The CHAIRMAN. Well, then you knew—what you got from outside sources, were they reliable?

Mr. MUNSEY. They were reliable—they were the most reliable I could get.

The CHAIRMAN. Well, do you consider them reliable, Mr. Munsey?

Mr. MUNSEY. I considered they are reliable, and I still consider they are reliable.

The CHAIRMAN. Certainly. I am sure you do.

Mr. MUNSEY. As to the tonnage.

The CHAIRMAN. There are over 100,000 persons, I believe, who have stock in the United States Steel Corporation?

Mr. MUNSEY. Yes.

The CHAIRMAN. And this article would be liable to affect them very materially, and other subsequent persons. I should think you would have used great care.

Mr. MUNSEY. I did use great care.

The CHAIRMAN. Now, Mr. Munsey, suppose your estimate had been inaccurate as to the number of tons that were available. Instead of having 400,000,000 tons of available ore—[reading]:

> Its ore is estimated at 700,000,000 tons. It is not as high grade as the northern ores, but assuming that it is worth 15 cents per ton, it alone would amount to $105,000,000.

Now, let us assume that they did not have that much ore—that 400,000,000—and that the 400,000,000 tons of ore was all the available ore not preempted by other steel concerns down there——

Mr. MUNSEY. Yes.

The CHAIRMAN. Practically all of it——

Mr. MUNSEY. Yes.

The CHAIRMAN. Then it would be an insurance against competition the same way that the Hill ores were, would it not, in that locality?

Mr. REED. Where do you find anything in the record to warrant that assumption?

The CHAIRMAN. Mr. Perrin testified, Mr. Moore and others testified, that there was not over 5 per cent of the ore in the Birmingham district on the market that was available for any new concern going into the steel business in the Birmingham district.

Mr. REED. I did not remember that testimony, and, in any event, they show by their testimony that what they meant by the Birmingham district was a tract of about 10 miles on the mountain east of Birmingham, and the testimony shows that mines are open and operating for many miles both to the north and south of that tract. It seems to me the assumption is not warranted by the record.

The CHAIRMAN. Oh, yes. Mr. Perrin testified that he had a blast furnace near Big Stone Gap in Tennessee, many miles from the Birmingham district, where you have identically the same ore you have in the Birmingham district, except a different iron content; but that those blast furnaces had been shut down for years because the cost of converting the ore into pig iron at any point other than the Birmingham district, where the ore and the coal and limestone were immediately adjacent, was so much greater that the difference was sufficient to prevent him from selling pig iron, except at unusual times in opposition with pig iron made from the same ore and the same coal and the same limestone where the facilities for assembling were greater.

Mr. REED. I wanted to avoid the possible inference, which I think would be unfair, which would result from considering the Birmingham district as limited to those few miles.

The CHAIRMAN. I think before we get through we will establish that fact to your satisfaction, that in the Birmingham district—and Mr. Schwab testified to the same thing—that there was no room for any other blast furnaces down there.

Mr. REED. I don't remember it.

The CHAIRMAN. Oh, yes.

Mr. REED. I wanted to caution the chairman against making any assumption that the record does not warrant.

The CHAIRMAN. I was quoting the record.

Mr. YOUNG. There is a good deal of contradiction in the record as to what is meant by the Birmingham district. It appears that all of the witnesses did not mean the same thing by that term.

The CHAIRMAN. I wish to be understood distinctly as making this a hypothetical question. If my hypothesis is based upon ill-considered or inconsistent facts, or if there are not facts in the record to sustain the hypothesis, then, of course, nobody will be hurt either by the question or by the answer. Assuming that the ores of the Birmingham district that are available and that can be converted into pig iron economically and competitively were preempted by the absorption of the Tennessee Coal & Iron Co.; that is, that the Steel Corporation had the same position—identity in the Tennessee Coal & Iron Co. field so far as absorbing all the ore that was open to competitors or to new concerns that it had in the Lake Superior region by the Hill ore leases, then this would have been an insurance against competition in the same way, and practically to the same extent that the Hill ore lease was, would it not?

Mr. BARTLETT. I have a statement here in the testimony with reference to the Birmingham district, on page 1232 of these hearings, in which you asked Mr. Topping the following:

> The CHAIRMAN. I see, on page 32 of the forty-seventh annual report of the Tennessee Coal, Iron & Railroad Co., this statement as of December 31, 1906:
>
> "The knowledge that your executive committee has acquired as to the tonnage and character of the iron ore, coal, and limestone owned in fee simple by your company, satisfies them that in wealth of raw materials required for the manufacture of iron and steel your company ranks as second to only one in the world, and is far in advance of any other iron or steel producer in cost of assembling its raw materials for manufacture.
>
> The mineral reserves of coal and iron contained in your lands, as computed by competent authorities, are estimated to be 700,000,000 tons of iron ore and 2,000,000,000 of coal. Approximately, one-half of your coal supply is of a superior coking quality, and your iron ore is largely of a self-fluxing character, analyzing approximately 38 per cent metallic iron. This ore is well suited to the manufacture of high-grade foundry pig iron and to the production of basic pig iron for use in the manufacture of basic open-hearth steel.
>
> Is that the statement prepared by you at the time as the chairman of the board?
>
> Mr. TOPPING. That is the statement I made to the stockholders.
>
> The CHAIRMAN. Is that a correct statement?
>
> Mr. TOPPING. So I believe; it was the report of our engineers, and based on their own estimate. I might say in that connection that that estimate was not based on complete drilling records, the property was not entirely drilled, and is not as yet to-day, so far as I know; but, based on the tonnage produced per acre and from the opened-up properties, our own engineering and mining department believed that that was a conservative statement, and I accepted that statement for my report to the stockholders.
>
> The CHAIRMAN. Mr. Reed was not with us at that time, but the record is full of very complete and exhaustive evidence to that effect.

Mr. YOUNG. That relates to the total amount they held; not the proportion they held?

The CHAIRMAN. Mr. Perrin and Mr. Moore both testified that there was not over 5 per cent of available ore in the district that was not leased or owned in fee by some going steel company, and that these scattered holders were a little batch here and a little batch there that were not available, and I asked Mr. Schwab about that in addition, and he said it would be impossible for anybody else to go into the Birmingham district and start a steel company.

Mr. YOUNG. Yes; but they defined this small territory.

The **Chairman.** Oh, yes. There are worlds of low-grade ore stretched almost from New York to the Gulf. The whole mountain region has ore in it, but it is no more account than salt for making pig iron at the present, because you can not make it at anything like the cost you can where you have the facilities. Now, Mr. Munsey, did you make any inquiries as to the—you speak of low-grade ore—as to the per cent of iron content in this ore down there—the quality?

Mr. **Munsey.** I don't know. I don't remember the processes I went through of absorbing the information I got. I referred to all the printed matter I could get, and talked with many men and made up a general estimate from the sources of information I had.

The **Chairman.** You were aware of the fact that 3 tons of this ore will make as much pig iron, speaking roughly, as 2 tons of Superior ore?

Mr. **Munsey.** Well, I knew it was—I did not know anything about the manufacturing process of it, scientifically at all; did not pretend to.

The **Chairman.** Did you inquire as to the cost of making pig iron in Birminghom and in Pittsburgh—the relative cost?

Mr. **Munsey.** I presume I went into all of those matters that would naturally bear upon the subject.

The **Chairman.** Well, if you did know, and if you ascertained the fact, if it is a fact; if you had seen from reliable sources the statement that 3 tons of this ore would make as much pig iron as 2 tons of the Mesabi ore or the Superior ore—that is, a fair grade of this compared with the average grade of that ore, and that they could make a ton of pig iron about $4 cheaper at Birmingham than they could at Pittsburgh, what effect would that have had upon the calculations you have made here as to value?

Mr. **Reed.** Will you add to that the hypothesis that not more than half of that pig iron is available to the South, and the freight rate to the North is more than $4——

The **Chairman.** No; I can not.

Mr. **Reed.** Don't you think that is a fair hypothesis?

The **Chairman.** Let us see; what is the rate on a ton of pig iron from Birmingham to Chicago?

Mr. **Reed.** Four dollars and thirty-five cents is my recollection.

The **Chairman.** What is the rate from Pittsburgh to Chicago?

Mr. **Reed.** I do not recall.

The **Chairman.** What is the rate from Birmingham to St. Louis?

Mr. **Reed.** I am not a rate expert?

The **Chairman.** Well, it is not over $3.

Mr. **Reed.** There are blast furnaces right in Chicago.

The **Chairman.** Well, there are none in St. Louis. Take St. Louis.

Mr. **Reed.** I don't know what the freight rate is.

The **Chairman.** Well, it is $3, I think; not over $4. Would you say the rate from Birmingham on pig iron to St. Louis was $4 greater than from Pittsburgh to St. Louis?

Mr. **Reed.** No; I would not say it. I am talking about the actual conditions. The Birmingham pig iron is taken to Chicago for sale. They do not take pig iron from Pittsburgh to St. Louis for sale.

The **Chairman.** Would you say the rate on billets from Birmingham to St. Louis was $4 more than from Pittsburgh to St. Louis?

Mr. **Reed.** I really do not know.

The CHAIRMAN. Isn't it a large consuming market of billets?

Mr. REED. Not of Pittsburgh billets.

The CHAIRMAN. Well, billets of any kind?

Mr. REED. Of Chicago billets.

The CHAIRMAN. Would you say there was a difference of $4 between Chicago and St. Louis and Birmingham and St. Louis?

Mr. REED. I should imagine it is pretty nearly that much.

The CHAIRMAN. It should not be.

Mr. REED. Perhaps not.

The CHAIRMAN. Have the large consuming markets of steel products, like St. Louis, Kansas City, or San Francisco, or any points south of Mason and Dixon's line, or in that region, and west of the Mississippi River, that difference between Birmingham and Pittsburgh—and I am talking about Pittsburgh now, because the Gary plant—or Chicago, either—$4 a ton greater? Now, I will ask you this question: I believe you will admit, and it has been admitted on the stand by Mr. Perrin, that between El Paso, Tex., and Ironton, Ohio, that no other furnace could ship pig iron into the districts supplied for the Birmingham furnaces without a loss?

Mr. REED. I presume that is true.

The CHAIRMAN. Now, assuming that these Birmingham furnaces, by virtue of their location and their advantage in freight rates, just as Pittsburgh has an advantage in freight rates from the head or source of the Ohio east or from Cincinnati east, and as Chicago would have at places adjacent to Chicago—that this zone extended from Ironton, Ohio, to El Paso, Tex.; that it had that as its own, and that it supplied that zone with steel products made from pig iron $4 cheaper than any other blast furnace in the United States, would that have affected your estimate as printed here?

Mr. REED. I think that the value of pig iron does not entirely answer the question. My understanding is that it costs more—considerably more—to convert that pig iron into rails than it does the pig iron made from Bessemer ore.

The CHAIRMAN. It does. It costs $1 more—practically about $1 more; between $1 and $2 more to convert that into rails than it does to convert the Bessemer ore into rails, as stated by Mr. Kennedy, who, I believe, is an authority, and then the rails sell for a dollar more the ton than the Bessemer rails.

Mr. MUNSEY. Yes; but they can not make the open hearth rails down there.

The CHAIRMAN. Where?

Mr. MUNSEY. They can not make Bessemer rails down in Birmingham at as low a price as they can make them in the North, because in the North, I understand, they use a large percentage of scrap, and they do not have the scrap down there to enable them to use so large a percentage; consequently there is considerable of a differential there.

The CHAIRMAN. You were under that impression at the time you wrote this article, were you not?

Mr. MUNSEY. I don't know that.

The CHAIRMAN. Well, now, suppose you had known at the time you wrote that article that the Tennessee Coal & Iron Co. was the only concern at the time it was absorbed by the Steel Corporation on this continent that made rails out of non-Bessemer ore—made an open hearth rail——

Mr. REED. But, Mr. Chairman, that is not the fact, surely.

The CHAIRMAN. I am so advised, and I am sure I am right. Mr. Gates has testified that they had the first open hearth rail mill at the time they were absorbed; that the Steel Corporation had not installed its open hearth rail mills. I may be mistaken about that.

Mr. REED. The same mills will roll from open-hearth billets, as well as from Bessemer billets.

The CHAIRMAN. I understand, but had you installed your open-hearth furnaces, and were you making a ton of open-hearth rails at the time this Tennessee Co. was absorbed?

Mr. REED. Now, that is just the point of misunderstanding. The Tennessee Co., if it made rails at all, had to make them out of open-hearth steel.

The CHAIRMAN. Exactly.

Mr. REED. The Steel Corporation at that time was making all of its rails out of Bessemer steel, but it was perfectly able to make open-hearth steel at the same furnaces.

The CHAIRMAN. I understand, but it was not making it.

Mr. REED. Probably not.

The CHAIRMAN. That is the hypothesis upon which I based my questions.

Mr. REED. The way you stated the question at first was that the Steel Corporation could not make open-hearth rails. It could if it wanted to.

The CHAIRMAN. If you had known at the time you wrote this article that the Steel Corporation was not making open-hearth rails——

Mr. MUNSEY. I knew they were not.

The CHAIRMAN. And that the Tennessee Co. had received an order from one single concern for 150,000 tons of open-hearth rails for a dollar a ton more than was being paid for Bessemer rails, and that they had on their books orders for 450,000 tons, what effect would that have had upon your estimate?

Mr. MUNSEY. I don't know that that would have materially affected my estimate, when I did know at that time or was told at that time on very good authority that their purchase of the Tennessee Coal & Iron Corporation, the corporation was doing business, the Tennessee corporation or company was doing business, at a loss; that it was costing the company more to make its rails than it was getting out of them. Property is worth a price on which it will yield a proper return, either at present or prospective.

The CHAIRMAN. You knew that the Tennessee Co. was running at a loss?

Mr. MUNSEY. I had been told so.

The CHAIRMAN. At the time you estimated it as being worth——

Mr. MUNSEY. Fifteen cents a ton.

The CHAIRMAN. The ores being worth $105,000,000, and the coal being worth $100,000,000.

Mr. MUNSEY. Yes.

The CHAIRMAN. Now, did you——

Mr. MUNSEY. Let me make that clear, please.

The Chairman. Do you know what it cost to build a modern steel plant?

Mr. Munsey. No; but it costs a great deal of money.

The Chairman. Do you know about how much?

Mr. Munsey. I have known, but I don't know the exact figures now.

The Chairman. If they had the furnaces and had the ore, they could have put up a steel mill or put up a rail mill; you could put it up for $5,000,000, couldn't you?

Mr. Munsey. Perhaps; I should think so. I don't know about those things.

The Chairman. If they were running at a loss by virtue of the fact that the mill was not modern, it was only a question of interest on four or five million dollars that was involved in estimating the value of the property, was it not?

Mr. Munsey. Yes; and the management as well. One management will make a property a success and another management will fail to make it a success.

The Chairman. Well, do you know anything about the men who were in charge of the concern at the time it was absorbed?

Mr. Munsey. I knew some of them intimately. I knew Mr. Gates well—very well, indeed.

The Chairman. Mr. Ogleby?

Mr. Munsey. I had met him, but I did not know him enough to say I knew him.

The Chairman. Did you consult Mr. Topping?

Mr. Munsey. I either talked with Mr. Topping or had somebody go to him who knew him and talk to him for me.

The Chairman. How did you happen to talk to Mr. Topping in writing this article?

Mr. Munsey. He is a good steel man.

The Chairman. Do you think he is a reputable steel man? Would you rely on his judgment at all?

Mr. Munsey. I don't know of any reason why I should not.

The Chairman. What did you think of him as a steel man?

Mr. Munsey. I only knew of him as one of the public, a man about whom I had often heard.

The Chairman. How is he regarded as a steel man by the public?

Mr. Munsey. He is generally well regarded.

Mr. Bartlett. There is abundant evidence here that he is a very high authority.

The Chairman. Do you so consider him?

Mr. Munsey. I assumed he was a man of high authority.

The Chairman. I think you are right. Isn't he regarded as one of the most expert, live, efficient young men in the steel business?

Mr. Munsey. Mr. Topping?

The Chairman. Yes.

Mr. Munsey. I am not capable of answering that question accurately. All I know of Mr. Topping is in a general way.

The Chairman. Well, did you know at the time you wrote this article that Mr. Topping was not only in direct personal charge of the works of the Tennessee company, but that he was prominently identified with the Republic Iron & Steel in that region?

Mr. Reed. Not at the time this article was written.

The Chairman. I mean at the time the Steel Corporation absorbed the Tennessee Coal & Iron Co.

Mr. Munsey. Am I not right in my memory that Mr. Topping was president of the Tennessee Coal & Iron Co.?

The Chairman. You are right; yes.

Mr. Munsey. Then it was because of the fact that he was president of the Tennessee Coal & Iron Co. that I sought information from him.

The Chairman. Do you know Mr. Hanna?

Mr. Munsey. No; I don't know Mr. Hanna.

The Chairman. Well, do you consider those men that I have mentioned as safe and conservative careful business men and good steel men?

Mr. Munsey. I know of nothing——

The Chairman. Gates and Ogleby and Topping?

Mr. Munsey. Mr. Hanna has the reputation of being a very able business man, but what he knows about steel I don't know.

The Chairman. Have you heard of the firm of Pickens, Hanna & Co., or of Mr. Hanna as a practical ore man? Isn't he one of the biggest handlers of ore in the world?

Mr. Munsey. I know nothing of him in that connection.

The Chairman. Well, did your investigation show you—did you ascertain whether or not this company had spent six or seven million dollars in improving its property shortly before is was absorbed?

Mr. Munsey. I think I recall that.

The Chairman. Did you inquire to find out whether or not those improvements were wisely made?

Mr. Munsey. No.

The Chairman. Do you believe that sane and clear-headed business men, such as Gates and Topping and Hanna and Ogleby and Thorne and Oliver H. Payne, would have invested $10,000,000 each in a property inside of 24 months if they did not regard it as a very good proposition?

Mr. Munsey. I should not wish to say yes to that; I should not wish to say no.

The Chairman. Well, how do you account for the fact—you know they had invested this money, because you say you had investigated this property. How do you account for the fact—did it strike you as peculiar that these experienced steel men——

Mr. Young. Very few of those were steel men.

The Chairman. Gates had been in it for 20 years from a wire merchant up. Ogleby was an old iron man.

Mr. Young. Yes; but not a steel man.

The Chairman. Well, they were men expert in ore and expert in the management of men and machinery. They were men expert in forming holding companies and in the financial end of it, and there were men with many millions of dollars behind them. That is true, is it not?

Mr. Young. That is undoubtedly true.

The Chairman. How do you account for the fact that men like those I have named were spending money so lavishly—eight or nine million dollars in a few months on a losing proposition? Didn't that strike you as a little peculiar?

Mr. MUNSEY. I don't know that it did. I think they probably thought the property could be operated at a profit if they did it wisely.

The CHAIRMAN. If they had ore that could be assembled and converted into pig iron at $8 a ton when Pittsburgh ore was selling for $12, and that they could convert their ore into open-hearth rails at $2 a ton greater cost than the cost of making Bessemer rails, and that rail would bring a dollar more on the market, and they could sell those rails, 150,000 tons at a pop, to a man like Harriman, and had orders on their books for 450,000 tons more, do you think the mere fact that the mill that rolled this steel was antiquated would materially affect the value of that property?

Mr. MUNSEY. Theoretically that all sounds very good; but practically that corporation had not had a very good record for making money.

The CHAIRMAN. Now, you speak of "that corporation." It is true that corporation had never made any money, but were these men behind that corporation any length of time before it was absorbed?

Mr. MUNSEY. I should say all of those men to whom you referred as practical men, ore and steel men, some of them business men—I should not like to classify them quite in that way. I should think those men are men who take up many affairs of different kinds. Mr. Gates, to be sure, was a steel man, but Mr. Gates did not confine his mentality to the operations of steel. He was associated with many things.

The CHAIRMAN. Mr. Gates organized the American Steel & Wire Co. He was connected, I believe, with the old Illinois Consolidated Steel & Wire Co.?

Mr. MUNSEY. Yes.

The CHAIRMAN. And its properties were worth about—well, they had—it was capitalized at so many shares; they recapitalized it and made each share worth $175 common and $175 preferred, and then they recapitalized it again and made each share worth 160 and the common 120, and a few months later they recapitalized again so that one share of the original concern sold for 520, or nearly six times as much as in the first concern. Doesn't that look like pretty good business?

Mr. MUNSEY. That looks like pretty good business in securities, but I don't know that it means anything in the handling of steel.

The CHAIRMAN. If a man is in the steel business to-day, don't you think he ought to know as much about securities as he does about blast furnaces?

Mr. MUNSEY. I would not want to raise or argue that question at all; but Mr. Gates did not confine his activities to the practical handling of the steel business.

The CHAIRMAN. I understand.

Mr. MUNSEY. Mr. Gates had other interests.

The CHAIRMAN. What say?

Mr. MUNSEY. Mr. Gates had other interests, as well as steel.

The CHAIRMAN. Well, now, you say you have had no experience in the steel business?

Mr. MUNSEY. None whatever.

The CHAIRMAN. Have you had any experience in steel stock?

Mr. MUNSEY. I have.

The CHAIRMAN. You own some steel stock?

Mr. MUNSEY. I have.

The CHAIRMAN. You would naturally, then, be interested in the operations of the stock market, more or less?

Mr. MUNSEY. No; I have been pretty honest in that way in what I have done.

The CHAIRMAN. Oh, no; I didn't mean to reflect on your motives at all, but if I owned steel stock I would naturally watch the market to see whether it was going up or down.

Mr. MUNSEY. That would be temperamental.

The CHAIRMAN. Yes.

Mr. MUNSEY. Well, my temperament might not lead me to do it that way.

The CHAIRMAN. Don't you think it is as necessary in the steel business to-day for a man to be as much a master of the stock market as it is for him to be a master of his trade?

Mr. MUNSEY. I don't see any connection whatever.

The CHAIRMAN. Didn't the Tennessee Coal & Iron Co. come into the hands of the United States Steel Corporation by virtue of a stock transaction? Isn't that generally well known?

Mr. MUNSEY. It was taken over in the time of a panic by the Steel Corporation.

The CHAIRMAN. Yes.

Mr. MUNSEY. I would not call that a stock deal.

The CHAIRMAN. Well, the men that owned the stock—Mr. Oglevie, Mr. Gates, and others—have all sworn they did not want to give it up, but that it was a case of necessity; and Mr. Ledyard, who was the attorney for them, said they gave it up with great reluctance. Mr. Topping stated the same. Take Mr. Payne; he had 10,300 shares. Would you regard him as a conservative business man?

Mr. MUNSEY. A very able business man.

The CHAIRMAN. How about Mr. Hanna?

Mr. MUNSEY. I have the same opinion of him.

The CHAIRMAN. How about James B. Duke?

Mr. MUNSEY. The same.

The CHAIRMAN. E. J. Berwind?

Mr. MUNSEY. A very able man.

The CHAIRMAN. A. N. Brady?

Mr. MUNSEY. A very able man.

The CHAIRMAN. Mr. Oakley Thorne?

Mr. MUNSEY. I only know him as a banker.

The CHAIRMAN. Is he a good banker?

Mr. MUNSEY. I should think so.

The CHAIRMAN. Mr. H. S. Black?

Mr. MUNSEY. He is a good business man.

The CHAIRMAN. Mr. S. D. Stout?

Mr. MUNSEY. I don't know him.

The CHAIRMAN. Mr. J. W. Stimson?

Mr. MUNSEY. I don't know him.

The CHAIRMAN. Mr. S. G. Cooper?

Mr. MUNSEY. I don't know him.

The CHAIRMAN. Mr. Topping?

Mr. MUNSEY. I know of him.

Mr. BARTLETT. If you are through, Mr. Chairman, I would like to digress just a little bit. Now, you say in this article that there are items in this inventory that have been overvalued and there are other items that have been undervalued—greatly undervalued. That was your opinion at the time?

Mr. MUNSEY. Where is that page?

Mr. BARTLETT. I haven't got the page. It is just after the part I read before.

Mr. MUNSEY. After the total figures, is it?

Mr. BARTLETT. Yes; I will give you the catchword.

The CHAIRMAN. Page 368.

Mr. MUNSEY. I see.

Mr. BARTLETT. Now, you say there are items in this inventory that have been overvalued; there are other items that have been undervalued, greatly undervalued.

Mr. MUNSEY. Oh, I see. "If there are items in this inventory that have been overvalued there are other items that have been undervalued, greatly undervalued." That is it.

Mr. BARTLETT. Yes.

Mr. MUNSEY. That was probably my opinion at the time I wrote it.

Mr. BARTLETT. Well, can you recall what particular items you thought were undervalued?

Mr. MUNSEY. No; I don't know.

Mr. BARTLETT. And you say: "Our purpose has been to keep under the actual values rather than to exceed them and in the case of the ore lands and coal lands our figures are probably very much under actual values to-day." So these figures you did make were a conservative estimate, as I understand?

Mr. MUNSEY. Based on the contract of the Hill ore lands with the United States Steel Corporation.

Mr. BARTLETT. And if you had not pursued this policy of conservative valuation of property, you would have found that the total value of the inventory of the Steel Corporation's property would be $2,000,000,000, instead of one billion seven hundred and eighty-two million.

Mr. MUNSEY. Assuming that the holdings of the United States Steel Corporation are equally good—with the Hill ore holdings, I can see no reason why they should be valued at a less price than—why they should be valued at a less price than that fixed by the United States Steel Corporation and Mr. Hill for his ores.

Mr. BARTLETT. Yes; and you stated that while this was a large sum, and almost hardly susceptible of being conceived to such an extent that it appeared to be fiction——

Mr. MUNSEY. Yes.

Mr. BARTLETT. That there was no fiction in is, but that it was real?

Mr. MUNSEY. Yes; based on that conclusion. Well, based on the general rise in the price of the ore lands. I suppose a dozen years before the formation of the Steel Corporation those ore properties were selling for perhaps a cent or less than a cent a ton. I don't know the exact amount. A very, very small amount. You have some facts bearing on that. You have them in the testimony of the Merritt brothers.

Mr. BARTLETT. Yes. I did not hear that; but I read it.

Mr. MUNSEY. But a very small price. That price had increased in value, so that the Rockefeller ore properties were sold to the United States Steel Corporation shortly after its formation at what I recall as about 25 cents a ton. Then from the time of that purchase, we will say at 25 cents a ton, if I am correct in that, the price of ore lands advanced to 85 cents a ton, the price fixed between the Steel Corporation and Mr. Hill.

Mr. BARTLETT. 84.5 cents, I think it was.

Mr. MUNSEY. Well, about 85. Something like that. So that all of the upward trend of prices, together with the price made on the Hill ore lands and an article written in the optimistic period when we were forging ahead and in the first place in the world as a progressive country, gave me my viewpoint at that time as to values of these properties; that, together, as stated, with the conversations I had with a good many men seeking to get as close to an estimate—rational estimate—of the values as possible.

Mr. BARTLETT. Well, even with what is admitted, this seems to be the greatest industrial organization in the world, is it not, as far as you know or have read?

Mr. MUNSEY. It is, as far as I know.

Mr. BARTLETT. Did you own stock in the Steel Corporation at that time?

Mr. MUNSEY. I did.

Mr. BARTLETT. I do not want to ask the amount.

Mr. MUNSEY. You are quite at liberty to ask anything.

Mr. BARTLETT. You owned a considerable interest in the stock?

Mr. MUNSEY. I did; but not out of proportion to my interest in other things.

Mr. BARTLETT. I did not ask that.

Mr. MUNSEY. I would like to say that, though, if I may. Not out of proportion, price considered, to my interest in rails and other securities.

Mr. BARTLETT. The people or the corporation from whom you got this information were certainly aware that you were not unfriendly to the corporation?

Mr. MUNSEY. I should think so.

Mr. BARTLETT. That you were a considerable stockholder, and that the article was not written with any view of doing anything more than to give the public information about this enormous business concern?

Mr. MUNSEY. Absolutely.

Mr. BARTLETT. And to give the information as nearly accurate as you could?

Mr. MUNSEY. Most certainly.

Mr. BARTLETT. This was 1908?

Mr. MUNSEY. 1908.

Mr. BARTLETT. I will ask you a question now: Did you know or have you ever known that that corporation was distributing from the corporate funds for political campaigns?

Mr. REED. At what time, Judge?

Mr. BARTLETT. 1904.

Mr. MUNSEY. I don't know anything about that.

Mr. BARTLETT. You were never informed about that?

Mr. MUNSEY. No. I have never been a director in the corporation.

Mr. BARTLETT. You are a stockholder, however?

Mr. MUNSEY. Yes; but there are more than a hundred thousand others.

Mr. BARTLETT. Your money went in that way?

Mr. MUNSEY. What?

Mr. BARTLETT. The stockholders' money was contributed?

Mr. MUNSEY. Yes, but so was that of more than a hundred thousand others.

Mr. BARTLETT. Yes.

Mr. MUNSEY. I don't know anything about that at all.

Mr. BARTLETT. Well, do you approve of corporations like this contributing to campaign funds of political parties?

Mr. MUNSEY. No, I do not.

Mr. BARTLETT. Then, if you had known of it, you would have disapproved of it?

Mr. MUNSEY. I don't know; I might have and I might not have. I don't know what influence one stockholder would have in the policy of an organization as large as this.

Mr. BARTLETT. You have no objection to an individual officer contributing to such funds?

Mr. MUNSEY. If he contributes his own funds for campaign purposes, no; not as long as that is customary with the people of the country. I wish it might be done away with entirely. I wish there were no such thing as the use of individual moneys for such purposes.

Mr. BARTLETT. How long have you been of that opinion, Mr. Munsey?

Mr. MUNSEY. I should think for a very long time.

Mr. BARTLETT. But you have not followed it yourself; you have contributed yourself?

Mr. MUNSEY. I have.

Mr. BARTLETT. Considerable amounts?

Mr. MUNSEY. I have always done what seemed to me to be the work of a citizen to do.

Mr. BARTLETT. Well, if it is proper for the citizen to do it, why do you say it should be done away with?

Mr. MUNSEY. One man can not change a system. If you give for political purposes; if you have not come to the conclusion I have, that it were better that private individuals did not give anything, and you did give it and I did not give, then the cause that seemed to me—the party, cause, or purpose that seemed to me wisest in the management of the country would be at a disadvantage, from the fact that you had not arrived at the conclusion I had.

Mr. BARTLETT. Yes, but there are certain expenses connected with legitimate purposes that a citizen can legitimately give to, such as office rent, clerical force, the distribution of information—are you opposed to a citizen giving anything in that way?

Mr. MUNSEY. I am not opposed to it, so long as the public generally is not opposed to it. I think it were better—I think I will try to put this differently—I think it were better that our politics were entirely free from all of that sort of thing; that whatever expenses there are should be borne by the Commonwealth, and that individuals, corporations—no one should give.

Mr. BARTLETT. Well, do you think you could have a campaign in which millions of dollars—say, three or four or five million dollars were expended in a presidential campaign; don't you think that is a pretty exorbitant sum to expend for legitimate expenses?

Mr. MUNSEY. It would seem to me so, but I don't know anything about it. I am not a politician. I am a publisher. You perhaps know more about that than I do.

Mr. BARTLETT. These contributions you have made, I suppose you have made to the party to which you belong?

Mr. MUNSEY. Is this part of the legitimate inquiry that is going on?

The CHAIRMAN. I do not suppose the judge will insist on an answer to that question.

Mr. YOUNG. I think we are rather far afield, if the witness objects.

Mr. BARTLETT. I am not going to ask any questions that Mr. Munsey does not desire to answer. It is a fact of record in this case that the Steel Corporation contributed in 1904 the small sum of $10,000 that fall to the campaign fund of the Republican Party.

Mr. STERLING. Yes; and it appears in the record that it contributed to the Democratic Party too, did it not?

Mr. BARTLETT. Well, that was said in the sugar investigation. That has not been stated here.

The CHAIRMAN. I presume that this discussion between Judge Bartlett and Mr. Munsey is interesting.

Mr. STERLING. Well, it does not go to the question of the Steel Corporation contributing money, and I do not think it is anybody's business what Mr. Munsey gives to a political party or to a campaign fund.

Mr. BARTLETT. It may not be, but Mr. Munsey said he did not think it should be done, and he wished the practice could be stopped. If Mr. Munsey does not desire, as an editor of an important magazine that publishes articles along certain lines which he advocates—if he does not desire to state whether or not he has contributed large amounts of money to either party, I will desist, as far as that is concerned; but I have fallen into that line without any intention of finding out anything about Mr. Munsey's private business.

Mr. MUNSEY. It is quite all right, Judge.

Mr. BARTLETT. I wouldn't have asked it, except that I had seen statements in the newspapers of what had been done. Now, Mr. Munsey, you have thought about the problems before the country with reference to the regulation and control of great corporations doing interstate business, have you?

Mr. MUNSEY. I have.

Mr. BARTLETT. This committee will probably have some inquiry on that subject; at least some suggestions to make. Can you give the committee any suggestions that you have thought about, what the Congress should do in order to correct the evils that exist and which undoubtedly exist by operations of great combinations of wealth, either industrial or those engaged in the transportation of the business of the country?

Mr. MUNSEY. I have done a good deal of thinking about the problem, because it is a very important one. I don't know that my conclusions are at all accurate, but my own reasoning is that in a country of so much wealth, with corporations so large as we have now, I can not see how it is possible to get what the people want and get what we are seeking to get except through the strong governmental—

strong hand of the Government—governmental control. I can not see how it can be done in any other way.

The CHAIRMAN. What are the evils so imminent that the Federal Government should take cognizance of them, and so dominant that the States are not able to control them? What are those evils which should be now taken under the supervision of the Federal Government which have hitherto been left to the jurisdiction of the States?

Mr. MUNSEY. I should think it would be very difficult in interstate matters for the States to work those things out, because they might not cooperate. I should think there must be some governmental control that reaches the entire country.

The CHAIRMAN. I was not speaking of the reason why the Government should do it, but I was speaking of the specific evils which the Federal Government should take under its jurisdiction and control. What are the wrongs that you would right by Federal legislation?

Mr. MUNSEY. Well, in the case of the Standard Oil it seemed to be the opinion of the people that Standard Oil was a menace because it crushed competition. In the case of the United States Steel Corporation it seems to be the contention of the Government that it was in error because it kept up prices.

Mr. YOUNG. Did not crush competition?

Mr. MUNSEY. Because it did not crush competition.

Mr. REED. You will be sued if you do and sued if you don't.

The CHAIRMAN. Is that the government that you would have take charge of the States' affairs? Is that the kind of government whose jurisdiction you would enlarge, such a fool government as that?

Mr. MUNSEY. I would not call it a fool government.

The CHAIRMAN. I beg pardon. I did not mean to use such a strong term, but such a paradoxical government; a government that will punish one concern for competing and punish another for not competing, and take both cases into the Supreme Court of the United States, it looks to me more like an organized feeble-minded institute than anything else.

Mr. MUNSEY. There are many other corporations against which the Government has brought action.

Mr. BARTLETT. Mr. Munsey, you did not get through. You said the Government should control. The Government now undertakes to control and regulate interstate carriers by requiring them to charge only reasonable rates and desist from discriminatory practices, such as giving rebates or preferences either to the individual or to the community. Have you any suggestions to make as to interstate carriers which would obviate or correct any of the evils which exist? I mean, in the carriage now of interstate commerce.

Mr. MUNSEY. Well, what kind of remedies do you refer to?

Mr. BARTLETT. Well, do you think that the present law is sufficient or needs remedying?

Mr. MUNSEY. I should think that the present policy is more unwise than the law. I don't know but what the law is all right in itself.

Mr. BARTLETT. How do you distinguish between the policy and the law?

Mr. MUNSEY. Perhaps I am wrong in my premise, but I mean to say this: For instance, in the matter—in the attitude—of the Interstate Commerce Court, it is a question in my mind if it has not drawn too sharp a line, considering the high price of wages and the demand for still higher price of wages.

Mr. Bartlett. You mean the court or the commission?

Mr. Munsey. Well, the court or the commission.

Mr. Young. Well, the court is one thing and the commission is another.

Mr. Bartlett. The commission fixes the rates, and corrects them——

Mr. Munsey. The commission, I referred to, fixing the rates.

The Chairman. The commission fixes them and the court unfixes them.

Mr. Munsey. Yes; passes upon them.

Mr. Bartlett. You really mean the commission?

Mr. Munsey. Yes; I mean the commission. I should think the policy has not been broad enough for the best development of our railroads. I said something to that effect in an article that I wrote for the April number of Munsey's Magazine. I think you starve our railroads and you starve the people——

Mr. Bartlett. You mean that the rates fixed by the commission are too low?

Mr. Munsey. I think that they are low. I think that they are so low that they have forced the railroads to economies that have not been to the best interests of the people of the country.

The Chairman. Take the Duluth, Messabe & Northern, earning 60 per cent more than the operating charges on a capitalization of less than $4,000,000. How much more would you feed that to keep it from inanition?

Mr. Munsey. I would not take a case like that. I think where rates are too high they should be reduced, but where the rates are too low they should be made such that we can get the best railroad service in the world.

Mr. Bartlett. Then you think it is not so much a matter of rates as it is a matter of service—efficient service to the public?

Mr. Munsey. We should have the most efficient service in the world.

Mr. Bartlett. And the rates should be such——

Mr. Munsey. As to sustain the most efficient service and to give a rational return on the money invested.

The Chairman. Don't you think it would be well to have the Interstate Commerce Commission make a real investigation as to the cost of these roads and the amount of water in their stock, if any? What is a just rate, and what the people are paying interest on, whether an actual investment or a cunning manipulation of stocks and bonds and debts?

Mr. Munsey. I should not say so. The only way to get at it is to inventory the roads to-day.

Mr. Bartlett. Their physical valuation?

Mr. Munsey. Yes; with no allowance for good will, though there is decided value in good will to the road that has been well handled and well operated, but I don't think that should be taken into consideration, but rather the physical value of the railroad as it exists to-day would be the basis, to my mind, of determining what interest it should earn.

The CHAIRMAN. I do not mean to be understood as railing at the railroads.

Mr. MUNSEY. I beg your pardon?

The CHAIRMAN. I said, I do not mean to be understood as railing at the railroads. I am firmly convinced, while the railroads do a great many things that are reprehensible, that in matters for which they have been most bitterly assailed, offenses for which they carry all the blame, like rebates, undue allowances, private-car concessions, and a great many other such things as that, that the railroad is infinitely more sinned against than sinning.

Mr. BARTLETT. Mr. Munsey, passing from that, have you ever considered the question of whether the railroads should be permitted to own industrial manufacturing concerns, as well as to run and operate the great interstate roads that carry the freight and passengers?

Mr. MUNSEY. Well, if it were a question put up for me to vote on, I should vote against their doing so.

Mr. BARTLETT. You think that is one of the evils that should be corrected also?

Mr. MUNSEY. I think so, to the extent that I would vote against it.

Mr. BARTLETT. You mean you would prohibit them from doing so?

Mr. MUNSEY. From running manufacturing institutions; that is what I understood you to say.

Mr. BARTLETT. Yes; that is it. Let us turn the question around. What do you think of corporations who organize for industrial purposes to manufacture steel or iron or any other great product of the country which the people have to have, owning railroads which they can operate for their benefit in bringing raw materials to their manufactories. Do you think that should be stopped, too?

Mr. MUNSEY. My reasoning would be the same on that.

Mr. BARTLETT. That is the instance in this case, in this particular corporation which we are investigating.

Mr. MUNSEY. If it is a common carrier. If it is a concern that carries simply its own supplies, that is a different thing.

The CHAIRMAN. You draw a distinction between a railroad operated as a common carrier; that is, hauling for the public generally——

Mr. MUNSEY. Yes.

The CHAIRMAN. And a railroad used simply as a means of conveyance for this industry alone?

Mr. MUNSEY. Yes.

Mr. BARTLETT. In other words, if it were a railroad like a road from a sawmill into the woods to bring logs up to the place where they were sawn into lumber——

Mr. MUNSEY. Yes.

Mr. BARTLETT (continuing) That would not be objectionable?

Mr. MUNSEY. No.

Mr. BARTLETT. But if it were a manufacturing concern that made steel and iron from iron ore, and it owned the railroad that hauled not only their own products from the mines but served the public as well and other people engaged in competitive business, you think that latter kind of ownership should not be permitted?

Mr. MUNSEY. I should think it were better not. I should like, if you will permit me——

Mr. BARTLETT. I will be glad to hear anything you desire to say.

Mr. MUNSEY. I would like to go back a minute to those questions you asked me about fixing the price of Tennessee Coal & Iron. I stand thoroughly by that price, as I saw the situation at that time. I was told that there were 7,000,000 tons——

The CHAIRMAN. Seven hundred million tons, you mean.

Mr. MUNSEY (continuing). Of ore. I have since been told that that ore did not average—did not make a good average; that perhaps 400,000, or half of it, or something, was of much better grade than the other. But as seen from that point of view, with the ascending scale of ore values as they had gone up from 1 cent, or less than 1 cent, or perhaps much less than 1 cent in a quarter of a century, and the great and growing demand for iron and steel, and with a view to using up our raw materials as they were being used up, that price, it seems to me, was a reasonable price for that ore, based on all the information I got and the conversations I had with people. The coal—I was told that there were 1,000,000,000 tons of coal, and now I understand that there are about 2,000,000,000 tons of coal. Evidently I fixed too high a price on the coal.

The CHAIRMAN. You mean per ton?

Mr. MUNSEY. Yes; per ton. I don't know why I did that. I know that I did it in perfect good faith.

The CHAIRMAN. Certainly. Now, would you estimate the two billions were worth less than you estimated the one billion in the total of your estimate?

Mr. MUNSEY. From the information I have had, if I had to write the article again I should be inclined to do so.

The CHAIRMAN. You would be inclined to hold that because there is a billion tons of coal there more than you thought were there, that the 2,000,000,000 were worth less than you said the 1,000,000,000 was worth?

Mr. MUNSEY. Not because of that, but because the coal did not average as good a trade as I thought it did. I would not write the article, in the first place, without making a much more thorough investigation, but if I had to write the article I should think that the estimate of the coal, notwithstanding that it was estimated at a less price, is of less value to-day than I estimated it at.

The CHAIRMAN. What was the amount of fixed carbon in that coal?

Mr. MUNSEY. You are away over my head when you go into the scientific things.

The CHAIRMAN. That is way under your feet. What about the sulphur or ash?

Mr. MUNSEY. I don't know anything about it.

The CHAIRMAN. How about the thickness of the vein?

Mr. MUNSEY. I don't know anything about it.

The CHAIRMAN. How about the expense of mining?

Mr. MUNSEY. I don't know anything about it.

The CHAIRMAN. Dou you know to what depth they had to sink the shafts?

Mr. MUNSEY. No.

The CHAIRMAN. Or whether it was a slope or drift or shaft mine?

Mr. MUNSEY. No.

The CHAIRMAN. Do you know anything about the cost of mining per ton?

Mr. MUNSEY. I know nothing about practical mining.

The CHAIRMAN. Do you know its value as coking coal?

Mr. MUNSEY. In a general way, I understand it is good coking coal.

The CHAIRMAN. Then you know just as much now as you knew then about the thickness of vein, the per cent of fixed carbon, the cost of mining, and the only additional light you have had on the subject is that there is twice as much of it, and therefore you think it is worth a less total amount?

Mr. MUNSEY. No; not because of that, but because the grade is not perhaps as good as I thought it was at the time, or perhaps I was misled as to the value per ton of the coal at that time. I can not tell you where I got my information, from whom, but it was made up as writers make up their opinion—from the general information they get.

The CHAIRMAN. You estimated 1,000,000,000 tons, to be worth 10 cents a ton?

Mr. MUNSEY. Yes.

The CHAIRMAN. What would you say it is worth per ton now?

Mr. MUNSEY. My best answer to that is: If I were buying it I should want to put an expert on and find out.

The CHAIRMAN. What would you think now? You had a judgment then. Roughly, how much per ton now, on account of its being a different grade?

Mr. MUNSEY. I don't know at all.

The CHAIRMAN. Two cents less?

Mr. MUNSEY. I don't know at all what it is worth.

Mr. BARTLETT. He said he would have to get an expert to tell him.

The CHAIRMAN. I am very anxious to get your estimate now, because I give great weight to it.

Mr. MUNSEY. I do not think it would be useful for you to place any reliance on my estimate at all.

The CHAIRMAN. But, Mr. Munsey, I think too well of you to think that you would for an instant publish in a great magazine like this, where there are hundreds and thousands of them sent out—I have read magazines all of my life, for years and years, with great interest and with implicit confidence about matters industrial, political, and commercial, and matters moral and spiritual, and now, surely, you are not going to tell me that you would write an article affecting the value of a billion tons of coal and can not tell to what extent you have taken certain important elements into consideration, except to say that you were wrong then and do not know what is right now?

Mr. MUNSEY. That is exactly the position I take. I do not hesitate to say it is quite possible for me to be wrong.

The CHAIRMAN. Will you tell me how——

Mr. REED. You have been giving the opinions of gentlemen who nobody else except themselves would say were experts. Surely you are not going to force Mr. Munsey to give you an expert opinion, when he says he is not an expert.

The CHAIRMAN. I will ask you this, Mr. Munsey: Why did you change your opinion? You say you have concluded since it is not as high-grade coal as you thought it was.

Mr. MUNSEY. I have been told so.

The CHAIRMAN. Now, the person who told you that, was he a coal expert?

Mr. MUNSEY. Yes; I think so. I think the people who talked with me about it knew a good deal more about it than I did.

The CHAIRMAN. Did he tell you to what extent you were wrong in your estimate of the value of that coal?

Mr. MUNSEY. I think they are leasing these coal lands down there—you know all about this thing. They are leasing these coal lands down there at a very much less estimate than that was.

The CHAIRMAN. No. The testimony, as we get it, does not show from men who have lived in that field all their lives near these furnaces—does not show that it is purchasable to-day at less than 10 cents a ton.

Mr. MUNSEY. Isn't that the best of it?

The CHAIRMAN. Well, any of it that is available. Did he tell you to what extent you were wrong in your estimate?

Mr. MUNSEY. I don't remember the figures, but they were considerably under the figures of 10 cents a ton.

The CHAIRMAN. That is what I want to get at. Did he say you were twice as high?

Mr. MUNSEY. I don't know. I don't recall the figures.

The CHAIRMAN. Well, was it your impression from what he said that you were altogether wrong or that you were somewhat too high in your estimate on this billion of tons.

Mr. MUNSEY. I should think it is quite a good deal too high, I should think.

The CHAIRMAN. Perhaps 40 per cent too high?

Mr. MUNSEY. Well, I don't know that.

The CHAIRMAN. All right.

Mr. MUNSEY. Here is the point I wish particularly to make: That in all of the discussion in that article the price of the Tennessee Coal & Iron was fixed at fifty millions of dollars. That was the inventoried price, and that was the price on which I based all of my calculations and discussions when I said one billion seven hundred millions. I did not take into consideration at all that editorial side light on the property. I believed at that time, in that optimistic period, and knowing no more than I did, but writing that much from an editorial point of view—I believed that that—that those ore lands and coal lands were easily worth the prices that I fixed upon them. Whether they are worth that to-day or not I don't know; and if it would not be offensive to the committee, I should like to say, I don't care.

The CHAIRMAN. Not at all, Mr. Munsey, as far as the chairman is concerned. We have cross-examined you somewhat; I hope not tediously or unnecessarily, because I gave great weight to what you said. If this article had been written by some cub in the office of some newspaper here and published as a news item in some daily paper, anonymously, why, I should never have paid any attention to it, but the fact that it was incorporated in these hearings, that it has been discussed by many able and learned men, many men, which, if I were the author of that article, it would be a source of profound gratification to me, and it is on account of the fact that I regard your article with great concern and great weight—and I am inclined to think you are correct in your estimate of this commodity. Now you spoke of the fact that you ascertained that the Steel Corporation got from the Tennessee Coal & Iron Co. twice as much coal as you thought it did, and being more coal, that it was worth less per ton I think you are entirely correct in that. There was a greater area of coal.

Mr. Munsey. Certainly.

The Chairman. Did you apply that same reasoning to ores?

Mr. Munsey. I should think all ores are worth less to-day than at the time that article was written.

The Chairman. You thought there were 700,000,000 tons of ore and afterwards found there were 300,000,000 tons. Would you apply that same reasoning to the ore?

Mr. Munsey. Is there not 700,000,000 tons?

The Chairman. I understood you to say you discovered less ore.

Mr. Munsey. No; I said I have been told part of the ore was not of a good grade.

The Chairman. Mr. Munsey, will you kindly return at half-past 2? We will not keep you much longer.

Mr. Munsey. All right.

The Chairman. The committee will now take a recess until 2.30 p. m.

Whereupon, at 1 o'clock p. m., on the 29th day of March, 1912, a recess was taken until 2.30 p. m. on the same date.

AFTER RECESS.

March 29, 1912—2.30 p. m.

The committee reconvened pursuant to adjournment.

The Chairman. The committee will come to order.

Mr. Reed. Mr. Munsey.

STATEMENT OF MR. FRANK A. MUNSEY—Resumed.

Mr. Bartlett. Before Mr. Young proceeds, without any view of asking any questions that are not entirely agreeable to be answered by Mr. Munsey, I desire to proceed a little further along the line which I took this morning. You do not confine your objections or your criticisms of furnishing campaign funds to the final election merely. Don't you think it ought to be applied to the primary elections as well as to the general elections?

Mr. Munsey. Fore and after—everything.

Mr. Bartlett. The Congress seemed to have been of that opinion, and not only enacted a law that required the publication, so far as Congressmen are concerned, of election expenses during elections, but extended it last year to the primaries.

Mr. Munsey. Yes. I think that is perfectly right. I think the State should cover all of those expenses.

Mr. Bartlett. The State?

Mr. MUNSEY. I use the word "State," meaning the Government. I do not necessarily mean the States of the Union or the United States. I mean the Commonwealth.

Mr. BARTLETT. The sovereign that has the power over the particular election?

Mr. MUNSEY. Yes; I think it should assume all of the election expenses in every way, shape, or manner.

Mr. BARTLETT. Primary, too?

Mr. MUNSEY. Primary and everything.

Mr. BARTLETT. But this criticism—I will call it that—or objection that you have to the contribution and the use of money from contributions applies, in your estimation, as much to primary elections as to the real elections.

Mr. MUNSEY. Yes; I should think quite as much or more. I should think it is more pernicious in the primary election than in the other.

Mr. BARTLETT. Where I live the primary settles the election in many cases.

Mr. MUNSEY. Where is that?

Mr. BARTLETT. In Georgia.

Mr. MUNSEY. There is the same thing in California. If a man gets the majority you have to have no election afterwards.

Mr. BARTLETT. Well, that is not the law, but the effect of it is that a person nominated in Georgia has no real opposition at the election; not by reason of law, but by reason of a one-sided political situation. It is not the law, but it is the condition.

Mr. MUNSEY. Now, while I take that position, Judge, I do not mean to say that I myself am living up to that theory, because I can not live up to it so long as that system is in vogue; I mean to say, the system of giving. One man can not change a condition.

Mr. BARTLETT. You can start it.

Mr. MUNSEY. In a population of 100,000,000 you can not make a dent in it.

Mr. BARTLETT. If everybody in that line continues to go wrong, it will continue to go wrong unless some good man sets the way by departing from the bad practice.

Mr. MUNSEY. It takes a good deal better man than I am to make a dent in it. If you will let me give you an illustration——

Mr. BARTLETT. Sure.

Mr. MUNSEY. The newspapers of the country carry at times a great deal of advertising that they would wish not to carry; advertising that is not honest, that is not sincere, and is not for the benefit of the people. Sometimes swindling mining schemes; sometimes other swindling schemes.

The CHAIRMAN. Patent medicines.

Mr. MUNSEY. Yes; patent medicines and all that kind of thing. Now, there is not a decent newspaper proprietor in the country that carries that kind of advertising who does not do it with a positive protest, and yet the very fact that his competitor carries it so weakens his position that he is compelled to carry it or go down and out. Now, if he goes down and out wherein are the people benefited?

Mr. BARTLETT. If he goes down and out in struggling to correct the evil, it looks like the people are satisfied with it.

Mr. MUNSEY. The people are satisfied, perhaps, with the evil. They do not raise a protest against it. It rests with the people to do it but if they don't do it what is the publisher to do?

The CHAIRMAN. I want to get clear on that. Do you believe, Mr Munsey, that contribution for political campaign funds in large amounts, which funds are always used for improper purposes when made in large amounts, is morally wrong?

Mr. MUNSEY. Is moral in law?

The CHAIRMAN. Morally wrong?

Mr. MUNSEY. I don't know the difference between large amounts and small amounts in the theory.

The CHAIRMAN. Well, the contribution of money to political campaign funds, which make use of it for the debauching of the electrorate—do you believe that is morally wrong?

Mr. MUNSEY. I think it is politically wrong.

The CHAIRMAN. Well, morally?

Mr. MUNSEY. If you say it all goes for debauching the electorate, yes.

The CHAIRMAN. If any part of it goes for that purpose——

Mr. MUNSEY. I don't know how you are going to know.

The CHAIRMAN. If you are in doubt about it, is it morally wrong to give to a fund where the probabilities are that a man's suffrage will be bought and his citizenship bought?

Mr. MUNSEY. May I ask you to answer a question? You have had much more experience in the world than I. To what use do you think money is put that is given by an individual?

The CHAIRMAN. I think it is often put to a most pernicious use.

Mr. MUNSEY. I dare say it is.

The CHAIRMAN. Now, is that morally wrong in your opinion?

Mr. MUNSEY. I should think, while it is morally wrong, that it is in the nature of a necessity, so long as it is generally done and done by the opposing parties.

The CHAIRMAN. Now, do you believe——

Mr. MUNSEY. Much the same as I did the editorial.

The CHAIRMAN. Now, do you believe a man is justified in doing a thing that he believes to be morally wrong because there are a great number of similar sinners?

Mr. MUNSEY. Well, I should ask you to give me a specific case. I might wander off too far on general principles.

The CHAIRMAN. In this case, say, a thousand men, and each one is going to contribute $2, which $2 is to be used to buy a thousand other votes, and that thousand votes will settle an election. Now, do you believe that each one of those men is justifiable because he is one of a thousand who practice that sort of political activity?

Mr. MUNSEY. If it were put to me, would I contribute to the buying of a voter?

The CHAIRMAN. No; I am not putting that question.

Mr. MUNSEY. No; but I say if it were. I should say emphatically no; but if it were put to me to contribute toward the general machinery of nominations and elections, I should say yes; I have got to do it as long as it is in vogue. I should regard that as citizenship.

Mr. BARTLETT. The Congress has enacted a law which provides that no corporation incorporated by the United States, such as the national banks, etc., should contribute at all to campaign funds. If the Congress had the power do you think it should extend that law to prohibit any corporation over which it has control—that is, doing interstate commerce business—to prohibit that sort of a corporation from contributing also?

Mr. MUNSEY. Decidedly.

Mr. BARTLETT. Both in the primary and in the real election?

Mr. MUNSEY. Decidedly. I think the primary is basic.

Mr. BARTLETT. Well, can you imagine what these large funds for primary presidential delegates—some say about $3,000 a day is being expended in various headquarters in this city and other cities—what that could be expended for

Mr. MUNSEY. I don't know myself.

Mr. BARTLETT. I say do you imagine what it could be expended for?

Mr. MUNSEY. Well, we have 48 States, have we not now?

Mr. BARTLETT. Not 48 holding primaries just now.

Mr. MUNSEY. No; but I mean 48 States which are interested in this campaign.

Mr. BARTLETT. Yes.

Mr. MUNSEY. My understanding of that situation is that there is very little money raised in the individual States, and that the getting out of campaign literature, the holding of campaign meetings—I don't know; you know all about that thing, 10 times as much as I do.

Mr. BARTLETT. We do not do that sort of thing down our way, in the first place, and in the next place we haven't got the money to expend that way. Now, you do know that men are called on—men of means are called upon to contribute considerable sums of money every election, presidential and congressional, do you not, Mr. Munsey?

Mr. MUNSEY. I have not seen any time that they have forgotten it.

Mr. BARTLETT. You have been reminded every time about it?

Mr. MUNSEY. Yes; they are very punctual about it.

The CHAIRMAN. Mr. Munsey, you interest me very much in this discussion of isolated vice and collective virtue in the same transaction. Do you believe that if 500 men in a community, intelligent. brave, patriotic men, would get together and determine that they would use their influence and their voices to prevent the debauching of the electorate, that it would have a great influence in that community and do a great deal of good, even though it endangered either party with which those 500 men might be identified?

Mr. MUNSEY. I don't know just how much good would be accomplished, but I should like to be a charter member of the organization.

The CHAIRMAN. Exactly. Suppose they would preach a doctrine like this: That a man's citizenship is essential—his regard for his political honor, his respect for the high and exalted privilege of casting a vote, of being the only king in the world—that is what an American citizen is, in my opinion.

Mr. MUNSEY. Yes; I think 500 earnest citizens of brains and heart would accomplish a good deal.

The CHAIRMAN. Yes.

Mr. MUNSEY. I do not mean right away they would do it, but I think it would grow. It would accelerate the coming of the time when all of this thing is going to be wiped out, which ought to be wiped out.

The Chairman. If those 500 men should, for instance, take th position that the sale by a citizen of his voice in Government for s much money was a political offense as loathsome as the sale of he body by woman—that is, her standing for virtue—that his standing for honest citizenship; that his position as an honest, self-respecting patriotic citizen was as much debauched by the sale of his ballot a the position of chastity and decency of a woman is debauched by the sale of her body, do you believe those men would be as guilty a that woman?

Mr. Munsey. You put it very excellently and very strongly indeed, but you can not put it too strongly for me.

The Chairman. Exactly.

Mr. Munsey. I am thoroughly in accord with you.

The Chairman. Now, you speak not with 500, or with 1,000 tongues, but with 50,000 tongues. If you were to preach that doctrine editorially in every paper you publish, in every magazine, don't you believe if you were sui generis, isolated and alone, and that it meant great financial loss, that you would do a great work, a great service to the country?

Mr. Munsey. I suppose I can give you a concrete answer to that by saying that at luncheon to-day I asked Mr. Welliver, one of our editors, to write an editorial entirely along that line for the next magazine.

The Chairman. Now, don't you believe that your editorials would have even more weight if it were known that the editor practiced what he preached?

Mr. Munsey. I am ready to practice it with 500. I told you I would like to be a charter member.

The Chairman. But don't you think that with these great papers you could go alone with safety?

Mr. Munsey. No; I fear I would be unable to accomplish much alone.

Mr. Bartlett. Why couldn't you go alone? What is to prevent you from standing out like a great mountain in a desert for this reform?

Mr. Munsey. Judge, I have done a good deal of work in my time, and I think this is too hard a job for me to tackle alone. I will get my shoulders under it with you and others, but I don't want to go it alone. The Government can pass it and make it a law.

The Chairman. Do you believe—what do you think of the effect of a monopoly in a natural resource like coal or ore?

Mr. Munsey. I think it is just as wrong as it can be. I think if the Government had owned its great natural resources that there would never have been any Standard Oil of its power and size; there would never have been any United States Steel Corporation of its power and size; there would never have been any Andrew Carnegie—any wealth of the measure of Andrew Carnegie's—if the Government had owned its own coal, own ores, own copper, own water powers, and all the great natural resources of the Nation.

Mr. Bartlett. You seem——

Mr. Munsey. I think the Government either ought to own them or ought to control them so they could lease them, or——

The Chairman. But since the Government does not own the natural resources, if a resource like ore, for instance, or oil should become monopolized by any particular concern, what legislation would you recommend; what steps on the part of the Government to prevent the perpetuation of that particular monopoly?

Mr. MUNSEY. I don't know whether it would be feasible for the Government to get a bill through and condemn those lands—these great natural resources. If it were, I should certainly recommend that, and see that the mischief does not go any further than it should.

Mr. BARTLETT. You mean for the Government to operate the business——

Mr. MUNSEY. Yes. I don't know just the machinery of the outworking of it, but in the main, to control it in some way.

Mr. BARTLETT. That would be rather Utopian.

Mr. MUNSEY. Perhaps. I think, perhaps, we are drifting toward it. The oil that is being drawn now is worth $2 a barrel if refined—$2 plus the cost of refining. This tremendous waste is going on in burning your crude oil, thereby wasting the resources of the Government and robbing future generations of the advantage of cheap oils, cheap kerosene and gasoline, and everything that is got out of the crude oil; but you can not control this thing, you know, so long as it is owned in various individual hands.

Mr. BARTLETT. What time would the Government have to give to engaging in that sort of business?

Mr. MUNSEY. Well, I think that works out just the same as any business. You square your management to the job in hand.

Mr. BARTLETT. Then, to carry your suggestion further, I apprehend you are in favor of the policy of preventing monopoly of interstate commerce and the restraint of trade in interstate commerce, are you not?

Mr. MUNSEY. I am.

Mr. BARTLETT. Well, to carry your suggestion as to the ownership of coal mines and oil fields and other necessary natural products——

Mr. MUNSEY. Great basic products.

Mr. BARTLETT. Yes; you would go further and authorize the Government not only to regulate interstate business, but to control that, if necessary, by fixing prices?

Mr. MUNSEY. Well, that is a detail of outworking. I don't know how that is going to be done best; whether they have got to fix the prices or not. I should not think so. I should think another plan might work better. My idea of the transportation lines, for instance, is—the transportation business—that an inventory should be taken.

Mr. BARTLETT. Of the valuation, you mean?

Mr. MUNSEY. Yes; of valuation and taken as of a certain date. However much crookedness obtained in the building of that property up, I do not think you can get back to that now. The securities are in the hands of innocent holders. Those properties have grown, as real estate has grown, as it has grown in New York and as it has grown everywhere. Their terminals have grown, and they are entitled to their advance on that the same as anybody else. I should say you should take an inventory as of a certain date, and then allow the railroads to make a fixed percentage—to earn a fixed percentage on their investment.

Mr. BARTLETT. Regardless of the value of the service rendered in the transportation?

Mr. MUNSEY. No; I was going to get at that.

Mr. Bartlett. Well——

Mr. Munsey. But to demand a standard quality of service, an that the best appliances and most modern conditions obtain everywhere, and in addition that the railroads be allowed to charge rate that would maintain their dividends and save a guarantee fund fo the dividend, and also a fund for all the new improvements that com out, for prosperous seasons and dull seasons alike, so that the standar would always be kept up, and so that the dividends would always b kept up on the railroads.

Mr. Bartlett. That may be feasible in the case of the transportation business. I rather think that that might be obtained, and probably we are in line of obtaining that whenever we get where we can have a physical valuation of the railroads, and after obtaining that, then proceed along a line similar to that. I have thought about that some myself, and voted for the physical valuation of the railroads when I had an opportunity to do it. I offered an amendment to the interstate commerce bill in 1906 and 1908 to that end. But we come to another question where the same rule and the same reasoning does not apply as it does to the railroads—interstate commerce. That is, the control and regulation of business people like this great corporation of Standard Oil and the tobacco people——

Mr. Munsey. The industrials.

Mr. Bartlett. Yes; which have been chartered in States and which have a right to engage in interstate commerce, and which combine and fix prices and which interfere with interstate commerce. I don't mean to say this particular corporation does——

Mr. Munsey. No; I understand.

Mr. Bartlett. I hope nobody will infer I mean that. I refer particularly to those that have been adjudged to have done that—the Tobacco and Standard Oil and others.

Mr. Munsey. Yes.

Mr. Bartlett. Now, it is claimed by very prominent men, some very distinguished men, that that ought not—that the law ought to be such as to prohibit the interference with interstate commerce in a reasonable manner, but that the law is too harsh. Judge Gary has suggested to this committee the establishment of a commission, if necessary, to fix the prices of the product of these great corporations, so that there will be no opportunity for manipulation, and then, if necessary, to fix not only the methods by which they may do business and keep a strict supervision over them, but to fix the prices at which they may sell their products, if necessary.

Mr. Munsey. I have great admiration for the soundness of Judge Gary's reasoning, but if the question were put up for me to vote on as to whether I would try to apply first the same theory that I said I would apply to the railroads, to your Standard Oil and your United States Steel and the Tobacco Co. and other big organizations, I would vote to apply that before I would vote for the Government to fix the prices on those products.

Mr. Bartlett. Apply what, now? The present laws?

Mr. Munsey. No; not the present law. The taking of an inventory and saying to these men, "You may make so much money—such a percentage; you may earn such a percentage on your capital," as shown by this inventory.

Mr. Bartlett. Regardless of whether they monopolized the trade or not?

Mr. Munsey. I do not think it makes any difference to the public.

Mr. Bartlett. You do not?

Mr. Munsey. I would just as soon, under conditions like that, that the entire steel business or the entire oil business—I mean to say, there may be some reason that I do not see, but as I see it, I do not see how it could be any disadvantage to the public if the entire shoe business and the entire steel business and the entire oil business was done by one concern, providing this law made it perfectly clear that the people should not be taxed—should not be excessively taxed on the goods they consumed. Now, that would make it clear, because if the Government said—you take a billion dollars of capital—if the Government said you may make on this billion dollars capital 5 per cent or 6 per cent or 7 per cent, whatever you will, probably 5 per cent, is enough with a guarantee fund; I means to say if by reserving a fund that will always guarantee the dividend, under that condition 5 per cent would make our securities the best securities in God's great world. We would not need any bonds then.

Mr. Bartlett. Then only a few people could engage in the business of manufacturing oil or sugar.

Mr. Munsey. As one of the citizens, that would not make any difference to me, so long as I did not have to pay more for my oil or sugar.

Mr. Bartlett. That is, so long as you were not engaged in that business?

Mr. Munsey. I think it is rather a mistake for us to think of some friend of ours, or some member of our family, if he has employment in some business or not. We should think of the hundred millions and see that the hundred millions are not taxed an excessive amount for the goods they consume.

Mr. Bartlett. What would be the difference in that and the Government itself owning the business and fixing the price and selling it to the individuals and making everybody go out of business except itself?

Mr. Munsey. There is more danger——

Mr. Bartlett. What difference would it make to the people?

Mr. Munsey. Because the big concerns can furnish to the people at much less price. There is perhaps as much danger from too much competition as from not enough competition. I would like to give you one point—one illustration which seems to me to fit the case very well. Secretary Wilson of the Agriculture two years ago, or three years ago, when there was so much published about the high cost of living and such a protest about it, made an investigation of the retail charges placed upon meats in the various cities of the country. He found that in the city of Baltimore the average price—the average profit placed on meats was 16 cents and a fraction. I think I am accurate in that, but I am approximately accurate if not absolutely.

Mr. Young. A pound, 16 cents?

Mr. Munsey. No; 16 per cent. I am glad you spoke of that. In the city of Washington, 40 miles away, 42 per cent profit placed on by the retailers. That means that these Washington men who place 42 per cent profit on their meat are not making any more money, perhaps not doing as well as the Baltimore men are at 16 per cent, because in Baltimore you have your old-fashioned open market, open three days a week, I think it is—a certain number of days a week—and the business is concentrated in a few hands.

The Chairman. We have a market here open every day in the week.

Mr. Munsey. I don't know, but the people here don't want to go to market in this town, I think. They are not as economical as the people in Baltimore. You have here hundreds and hundreds of places where you sell meat, and each man has certain friends, and so on——

The Chairman. It is the example of the hotels here that has ruined the market. They make 40 per cent, and the hotel makes 400 per cent that feeds us.

Mr. Munsey. That is right.

Mr. Bartlett. You do not believe, then, the suggestion of Judge Gary that the Government ought to take charge of the business in the way he suggested, even to the extent of fixing prices?

Mr. Munsey. I would rather try out the other theory first. I won't say that is not a better theory than mine, but I would rather try out the other theory first.

Mr. Bartlett. And you believe, so far as prohibiting—so far as preventing monopoly or maintaining competition, that that is not a good thing to do?

Mr. Munsey. I don't see that it means anything to the hundred millions who do the manufacturing, so long as it is done at the lowest possible cost.

The Chairman. It would not make any difference to the public if one concern did all the steel business, under your theory?

Mr. Munsey. No.

The Chairman. And it would not make any difference to the public if one concern did all the cotton business?

Mr. Munsey. That is right.

The Chairman. And one concern did all the wool business?

Mr. Munsey. Providing the Government said on an honest investment you shall not make over, say, 5 per cent. I would like to make one provision in that. I would like to see more than one concern in it. I would like to change to that extent. I would like to see that, because with one concern you might not get the greatest measure of efficiency.

The Chairman. I mean so far as the public are concerned, if you had the same efficiency and it only charged a reasonable profit, it would not matter if one concern manufactured all the steel.

Mr. Munsey. Yes.

The Chairman. And another all the woolen goods and another all the cotton goods.

Mr. Munsey. That is right.

The Chairman. Now, then, would it make any difference if that one concern manufactured all three in the same way, with the same efficiency, and at the same low cost?

Mr. Munsey. Well, I do not know.

The Chairman. Would it make any difference if one concern did all the business if they only charged a fair price and made only a fair profit?

Mr. **Munsey**. In the first place, I do not think it would work out. I do not think it would be practicable.

The **Chairman**. I mean, in your theory would there be any harm if it could?

Mr. **Munsey**. I do not think it could be done. The lines are so divergent it would not work out. I want to put myself on record here as saying, in the interest of efficiency, that I would not like to see one concern do all of any one industry. I should like to see two or three concerns, perhaps more, but not so many concerns but that we could buy our goods at the lowest possible price and eliminate every bit of unnecessary expense.

Mr. **Bartlett**. How far would that be from socialism?

Mr. **Munsey**. That I do not know. You are over my head now.

Mr. **Beall**. What would be the limit to it? Where would you stop if you began a system of that kind?

Mr. **Munsey**. I will tell you where I stop in my business. I stop when I am wrong—when I find it out. I never try to be right. I have been successful, more or less successful, in acting on a conclusion when I reach it. When I found I was wrong I changed.

Mr. **Beall**. Would it be to the interest of the publishing business for the Government to step in and control the prices at which periodicals should be sold to the people of this country?

Mr. **Munsey**. Well, I was working on a little different theory, you know. I was working on the theory of the percentage of earnings on the capital invested.

Mr. **Beall**. Do you think that would be a wise policy applied to the publishing business? Suppose they applied that to the magazines?

Mr. **Munsey**. Whatever would apply to steel would apply to magazines.

Mr. **Beall**. Do you think that would be a good kind of policy for our kind of Government to begin?

Mr. **Munsey**. Yes; I think any policy that will result in furnishing goods to the consumer at a less price than any other policy is the wisest policy to follow.

Mr. **Bartlett**. Well, now, down in Panama the Government runs all sorts of stores and everything of that sort. That is temporary, of course, and the Government furnishes supplies to everybody down there cheaper than they can buy them at other places. I have been down there and seen that.

Mr. **Munsey**. Yes.

Mr. **Bartlett**. The Government has been able, in Panama, to carry on the business of furnishing shoes, hats, and all other things necessary to live with down there; it runs a hotel and everything of that sort, and the Government does it cheaper than anybody else down there has been able to do it.

Mr. **Munsey**. Yes. Well, that would be an experiment that I don't know, but I should think one of the greatest menaces—greatest difficulties that you legislators have to contend with is the effort always to be right; not only right, but dead right.

Mr. **Bartlett**. Some of us are dead before we are right.

Mr. **Munsey**. The general public seems to expect a man in public life should never make an error. Whereas it recognizes the fact that a man in business, no matter how big the business, is entitle to make a certain percentage of mistakes.

Mr. BARTLETT. The effort of some of the press is to suggest tha the man in public life never does right and is always wrong.

Mr. MUNSEY. Well, the press sometimes slips up itself.

Mr. YOUNG. Mr. Munsey, suppose your suggestion were adopte and the profits of concerns in business—manufacturers, we will say—were limited to 5 per cent, as you suggest, and they knew they neve could make any more than that, do you think you would ever ge the highest efficiency out of them?

Mr. MUNSEY. There might very well be, in connection with that some plan as there is with the gas company in Massachusetts. The are allowed to make a certain percentage, and as they decrease th price of gas—in the ratio that they decrease the price of gas to th consumer, keeping up to a standard all the while, they are allowed t make, by the State of Massachusetts, a larger income for themselves

Mr. YOUNG. Then, you would make that modification in the plan?

Mr. MUNSEY. That might very well be.

Mr. YOUNG. The lower the price the higher the percentage of profit you would allow the concern?

Mr. MUNSEY. Well, I think that something of that sort might be worked out. I know a big problem needs thrashing out in a great many ways, but, on general lines, it seems to me that there is a way out of our economic problems of great business and our transportation lines, which is to fix the amount that a concern can make. I don't care whether it is 5 per cent, 6 per cent, or 7 per cent.

Mr. YOUNG. That is simply an illustration?

Mr. MUNSEY. Yes; but I would make it enough so it would not be a burden on the people, on the one hand, and so that it would attract the best efforts and business energy on the other.

Mr. YOUNG. But is it not true that the great incentive to efficiency in the past has been the fact that the individual or corporation which was the most efficient reaped the largest harvest?

Mr. MUNSEY. Yes; I think so, and with a view to that, it might very well be an important thing to attach to that theory some kind of a reward for the highest grade of efficiency.

Mr. YOUNG. Yes.

Mr. MUNSEY. I think that I should certainly recommend that.

Mr. YOUNG. Well, now, to return from this very interesting diversion to our mutton. This statement which appears to be an inventory in your article on the Steel Corporation, I understand you to say that the descriptions of the property—inventoried property—you received from the Steel Corporation itself?

Mr. MUNSEY. I did.

Mr. YOUNG. But did they value all of it?

Mr. MUNSEY. No; they did not.

Mr. YOUNG. And sometimes where they did value it, you changed the figures according to your judgment after investigation?

Mr. MUNSEY. According to my judgment and according to the feeling and according to the atmosphere and according to every bearing, as a man writing does bring into play.

Mr. YOUNG. And the figure on the ore, which is the largest item, that you fixed yourself after such investigation?

Mr. MUNSEY. I did.

Mr. Young. Is that true also of——

Mr. Munsey. I think I will add also that, if my memory serves me right, the price suggested for their steamships I reduced. I introduce that to show you I was not lavish in my prices regarding their figures.

Mr. Young. Now, this large item of $142,000,000 of coal and coke properties, do you remember whether you altered those figures or not?

Mr. Munsey. I do not.

Mr. Young. Or the item for limestone or natural gas?

Mr. Munsey. The only figures that I remember distinctly are the ore and the steamships.

Mr. Young. Yes. Do you remember whether you made any alterations in the values of the railroads as they gave them to you?

Mr. Munsey. I don't remember that I did.

Mr. Young. Or the manufacturing plants?

Mr. Munsey. No. I had no way of knowing anything about them.

Mr. Young. Their liquid assets, I suppose, are practically a fixed——

Mr. Munsey. Yes; reported every quarter. I did assume on the amount of ore that they quoted the correct amount, but as to the price I did think that I could be somewhat independent from them, from all these various reports that I got, and particularly was I guided by a price fixed on the J. J. Hill ore lease.

Mr. Young. Then, in exercising your judgment on these valuations, you relied entirely on the information that you received from others whom you thought were competent——

Mr. Munsey. I did.

Mr. Young (continuing). To give it.

Mr. Munsey. I did.

Mr. Young. You had no practical experience?

Mr. Munsey. None whatever.

Mr. Young (continuing). In the iron and steel business and the iron-ore business and coal business.

Mr. Munsey. You know, in writing an article a man gathers information from every side; talks with people, thinks about it, analyzes it, considers it, and he turns out the conclusions that he reaches—the conclusion that he reaches.

Mr. Young. Yes.

Mr. Munsey. Perhaps it is partially atmospheric, perhaps partially temperamental, perhaps partially the feeling of the hour, but in all events it is wrought out and brought out in that way.

Mr. Young. Your figures, your total of $1,782,000,000 is a considerably higher valuation than the investing public has ever put upon those properties, is it not, as evidenced by the price of the stocks in the market?

Mr. Munsey. Well——

Mr. Bartlett. You mean evidenced by the stocks?

Mr. Young. Evidenced by the price of the stocks in the market. That is evidence of what the public is willing to pay for it?

Mr. Munsey. Well, you see the public has to consider not only the inventoried value of those things—the investing public has not only to consider that, but he must consider the corporation in its relation to the Government, with the Sherman law, and all of those variou things, and with regard to other competition that is coming up, an so forth.

Mr. YOUNG. Yes.

Mr. MUNSEY. Each security is very much governed by the valu of other securities. All securities, more or less, go up and down together.

Mr. YOUNG. Yes; but is it not a fact that this price is higher?

Mr. MUNSEY. Oh, it is higher; yes.

Mr. YOUNG (continuing). Than ever the public placed upon it, a evidenced by the price of the stocks in the market?

Mr. MUNSEY. Yes; it is higher than the Wall Street quotation ever gave it.

Mr. YOUNG. Yes. Was there a considerable advance in the stock in the months following the publication of this article?

Mr. MUNSEY. I do not remember that. It had been advancing—it had been advancing—the common stock had been advancing all the while from 23½, I think, down there somewhere at the lowest point of the panic. It had been constantly advancing.

Mr. YOUNG. The lowest point of the panic of 1907?

Mr. MUNSEY. Yes; and went on advancing until the latter part of December, 1909.

Mr. YOUNG. Yes; at the time you published this article, as I understood you to say to Judge Bartlett, you were a considerable owner of stock in the corporation?

Mr. MUNSEY. I was. Also a considerable owner of——

Mr. YOUNG. Other stocks?

Mr. MUNSEY. Other stocks; yes.

Mr. YOUNG. Did you increase or decrease your holdings after the publication of this article?

Mr. MUNSEY. I think I increased my holdings for a considerable time—more than a year after that.

Mr. YOUNG. Yes. So at all events you had the faith in your own estimate which induced you to invest more money in this enterprise.

Mr. MUNSEY. Yes; and I brought down here the compilation of the articles that I had published on the financial situation before, dating back into the early part of 1908 or the latter part of 1907, on the business situation, and I said to the public that these prices were low for good securities, and I said to them what I say to you, that that is what I am doing myself. I would not tell you that I thought these prices were low if I did not act on the same conclusion myself.

Mr. YOUNG. The prices were considerably lower at that time than they were a year or a year and a half——

Mr. MUNSEY. That is 1908. They kept on advancing all the while up to the latter part of 1909.

The CHAIRMAN. When was it steel common was selling at about 10 cents?

Mr. MUNSEY. That is a long time ago; but in the panic of 1907 it went down to about 23 or 24; somewhere around there.

Mr. YOUNG. Did the price advance considerably soon after the publication of this article that you remember?

Mr. MUNSEY. Not to my knowledge. I have no knowledge that it did. I think it began to rise much more rapidly in September, or along in the winter.

Mr. Bartlett. It did advance some time after this article was published?

Mr. Munsey. Oh, it kept on advancing. It had been advancing before. I don't think its pace was accelerated by the publication of that article.

Mr. Bartlett. The article was not calculated to depress it?

Mr. Munsey. It was not calculated to depress it. It was calculated to bring out the facts about a very big dramatic company. It is the biggest thing of its kind in the world, and to write about the biggest thing of its kind in the world is a very good article for a magazine.

Mr. Bartlett. And another thing, it is something that the people of the country should know about.

Mr. Munsey. It is something that the people should know about and the investors are interested in it. With 100,000 investors—that is a pretty good following.

Mr. Bartlett. I did not know of it myself until I read it in the hearings.

Mr. Young. Now, to go back to the Tennessee Coal & Iron Co., do I understand that the information you received from the Steel Corporation in regard to the value of that property was included in the inventory at which they valued it at $50,000,000?

Mr. Munsey. That is the only information I received about it.

Mr. Young. Now, I have before me Herbert Knox Smith's report on the steel industry, No. 1, page 257, in which it is stated that more careful estimates of coal and iron of the Tennessee Coal & Iron Co. were made by the Steel Corporation after it purchased the property, and then it gives the figures which he received from the Steel Corporation as the estimates made by their engineers. In that I see that the coking coal was 217,000,000 tons proven; steam and domestic coal, 68,000,000 tons proven—the existence proven.

Mr. Munsey. Yes.

Mr. Young. Making 285,000,000 tons. That, then, they placed as probable 90,000,000 more of coking coal and 351,800,000 tons of steam and domestic coal, making 441,000,000 of probable. Then, they said it was possible that there were 670,000,000 tons more. Then, going to the ore, they say red ore, reasonably assured, including tonnage already developed; that is, the tonnage that they have actually developed by opening it up and that which they feel reasonably sure exists, and they fixed that at 175,000,000 tons. Then, red ores of a lower grade, but which may be of future value—could not be used at the present time—204,000,000, making 379,000,000, and, then, an additional probable tonnage of 317,000,000. So it would seem that all they were dead certain of was 285,000,000 tons of coal and 379,000,000 tons of ore, of which 204,000,000 was not at present available; too low grade to be used in the present market. Now, if you had had those figures before you, instead of the figures you did have, don't you think it likely that you would have made a rather more moderate estimate?

Mr. Munsey. I certainly should have.

Mr. Young (continuing). Of that property?

Mr. Munsey. I certainly should have. When did he get these figures out? When he made his report about a year ago?

Mr. YOUNG. That is when he got them out.

Mr. MUNSEY. And, of course, that represented a thorough investigation, and with the work of an engineer.

Mr. YOUNG. Yes. He refers to these former estimates made at a previous time, in which larger amounts——

Mr. MUNSEY. Yes. Now, you see my estimate—this is the estimate that we relied on; the estimate taken in the inventory which was placed at $50,000,000, buildings and all.

Mr. YOUNG. Yes.

Mr. MUNSEY. My editorial comment was based on the general knowledge that I was able to obtain at that time and represented what I believed to be the accurate state of the situation.

Mr. YOUNG. Now, the chairman in questioning you referred to the fact that the Steel Corporation was not making any open-hearth rails at the time of this purchase, and that the Tennessee Coal & Iron Co. had received an order from Mr. Harriman for 150,000 tons. We also have it in the evidence that the Steel Corporation had a large number of open-hearth furnaces at this time, and that it could roll open-hearth rails just as easily as it could Bessemer in its mills. I see here from Mr. Burchett's report of the Geological Survey—a pretty well-known publication—that in the year 1907, the year before you wrote this article, that there were made in the United States 11,549,736 tons of open-hearth steel, while——

The CHAIRMAN. How much?

Mr. YOUNG. 11,549,736 tons.

The CHAIRMAN. That was in 1907?

Mr. YOUNG. In 1907, the year this purchase was made, of which the Tennessee Coal & Iron Co., of course, made only a very few hundred thousand tons. Now, under those circumstances would you think there was anything in the fact to which the chairman referred, of this company being the only one that actually made open-hearth steel rails, that that added anything especially to the value of the property?

Mr. MUNSEY. Would I think what?

Mr. YOUNG. That there was anything in the fact that the Tennessee Coal & Iron Co. was the only company actually making steel rails, when the Steel Corporation had the capacity to make 10 times as much, that that added anything especially to the value of the Tennessee Coal & Iron Co.?

Mr. MUNSEY. Well, I should think the facts that you relate there make it conclusive that the Tennessee Coal & Iron Co. was not making all the rails.

Mr. YOUNG. No.

Mr. MUNSEY. Some other company was——

Mr. YOUNG. No. This amount of 11,000,000 was not all rails. This was steel; all kinds—open-hearth steel.

Mr. MUNSEY. I don't know.

The CHAIRMAN. Now, I want to put the converse of that proposition. Suppose there had never been any rails up to that time made from phosphoric ore and that the manufacturers of steel had confined themselves entirely to Bessemer rails, and this southern ore had never been utilized for anything except foundry pig iron, and the ores had been controlled entirely by makers of foundry iron or by concerns that had neither the skill nor the capital to enter the rail business, and one morning they woke up and found a new company had been organized and that Mr. Harriman and others like him were patronizing it to the tune of about 400,000 tons of rails——

Mr. YOUNG. One hundred and fifty thousand tons for Harriman.

The CHAIRMAN. I know; but they had 400,000 on their books; 150,000 was the Harriman order alone. Don't you think that would have been an item of considerable interest to the Steel Corporation if the Steel Corporation had hitherto had a monopoly or an approximate monopoly in the steel business?

Mr. REED. Mr. Chairman, the records show it did not have a monopoly of the steel business.

The CHAIRMAN. I do not pay any attention to those per cents.

Mr. REED. Those are the percentages of actual output.

The CHAIRMAN. I do not think they amount to a row of pins. What does it matter whether the Steel Corporation had 49 or 89 per cent of the business; if it was done by Jones & Laughlin, or the Pennsylvania, or the Cambria Co., with their interlacing directorates or fixed contracts—what difference does it make? And here was a free-lance entering the field with a 150,000-ton order from Harriman alone and 400,000 tons booked—don't you think that that would have been a strong inducement to the Steel Corporation or any other concern that hitherto had a monopoly to go down and take hold of that property?

Mr. MUNSEY. To take over that business?

The CHAIRMAN. Yes.

Mr. MUNSEY. If the Steel Corporation could see how it could earn money on that—turn it into a profit without robbing its other properties—then there can only be one answer to it.

Mr. YOUNG. Right there, Mr. Munsey, supposing, as was the fact, that the Steel Corporation at that very time had a capacity for the manufacture of steel rails of several million tons, would there have been any special necessity——

Mr. MUNSEY. In excess of output?

Mr. YOUNG. Yes; which they could make. Having the furnaces and the rolling mills, would there have been any special necessity to buy the Tennessee Coal & Iron Co.?

Mr. MUNSEY. My answer to that is really covered by my answer to the chairman, when I said if it would not rob the existing properties of orders.

Mr. YOUNG. Yes.

Mr. MUNSEY. I should say that if they had more capacity than they had orders—if it were put up to me to vote on whether I should take it over or not, I should give it very thorough consideration before I should say "yes."

The CHAIRMAN. The Steel Corporation's capacity exceeds its output in pig iron, for instance, by about 6,000,000 tons.

Mr. MUNSEY. You have got me talking about scientific subjects that are way over my head. I am just a publisher—a newspaper man.

The CHAIRMAN. You operate under water very interestingly.

Mr. MUNSEY. Thank you.

Mr. YOUNG. You said something about the large advance in the price of ores from a period 12 years before the Steel Corporation was organized until a little later than that.

Mr. MUNSEY. When the Rockfeller sale was made.

Mr. YOUNG. Yes. I see that 12 years before the Steel Corporation was organized, the Mesabi Range had not been opened at all.

Mr. MUNSEY. When I say 12 years, I mean to say half a dozen or a dozen years.

Mr. YOUNG. Yes. 12 years. All the ores were being mined on the ore ranges and the royalties were at least as high as they are now. The Mesabi coming in and a panic coming on at the same time brought down the royalties, of course.

Mr. MUNSEY. Yes.

Mr. YOUNG. I think that is all.

Mr. MUNSEY. From the questions that have been asked here I should like to make one or two remarks, if I may?

Mr. YOUNG. We would be glad to have you.

Mr. MUNSEY. So that there can be no misunderstanding that would be detrimental to the management of the Steel Corporation and men of my acquaintance and friends in New York City. It might be inferred from these questions that I, in writing this article, was actuated by a desire to increase the value of the steel shares, and that I was working in sympathy with the management of the Steel Corporation and others. If such a conclusion were reached, it would not be true.

Mr. YOUNG. I did not mean to raise any such question.

Mr. MUNSEY. No; I know that you did not, but I want to get that in as part of the record. It would not be true. I was actuated entirely by the desire to give the facts as I could gather them of the inventory, the actual property, about this great mysterious concern—mysterious, because so great, so marvelous, the biggest thing in the world of its kind—and it was a good magazine article; and, as a publisher, I published it from that point of view, and I would like to publish a similar article about the Pennsylvania Railroad, about the Great Northern Railroad, about the New York Central Railroad, and the Union Pacific Railroad. I should like to publish in my magazine once a month for the coming months until I had covered these great things in which the public is interested. I should like to publish a complete inventory, as accurate an inventory as it is possible to get, but as to any cooperation with anybody connected with the Steel Corporation or anybody else I hope you will permit me to say this: That I am, first and last and all the time, a publisher; that whatever I have done in the way of investing in securities has been quite as independently as anything I have ever done in the publishing business, and God knows that is absolutely independent of anybody else. I go down to Wall Street less frequently than I go to Europe. I have never bought or sold a share of stock in my life in conjunction with any other man or any other men. I have never been a party to any scheme to put up prices or depress prices in my life. I have never been connected, directly or indirectly, with any pool in any security in my life. I never have had a ticker in my office. I do not bother with quotations of stocks. I invest in securities when I think that the country is on a sound footing, and that things are going right, and that the squalls are out of the sky. I invest in them just exactly as I would invest in real estate, and I invest for a period, not for a day. That is speculation. I don't know anything about that phase of it. I am too busy a man; I have no temperament for it; no liking for it. I buy it as I would buy a piece of real estate, that I could see in six months or a year or five years that there would be a good profit in it. I appreciate you letting me say that, because there has been so much talk about it that I wanted to get that fact out.

The CHAIRMAN. We are very glad to have you say it. It adds weight to what you have said, that your estimates of the values of the Steel Corporation were based upon their tangible visible assets, and not upon any desire to boost the stocks in the slightest.

Mr. YOUNG. I do not understand Mr. Munsey to say that. I understand him to say it was not with any desire to boost the stock, but I understand him to say it was based entirely on information from others.

Mr. MUNSEY. Yes, that is right.

Mr. YOUNG. And without any examination of the property or sending anybody to examine the property.

Mr. MUNSEY. Information received from others——

Mr. YOUNG. As a publisher, in order to write an article which you intended to be true?

Mr. MUNSEY. Yes, as a newspaper or magazine man writes things—as an editor writes things. It went through precisely that same process, and the thing that influenced me more than anything else in the matter or prices of ore lands which looked like a very tangible guide, was the price fixed on between Mr. Hill and the Steel Corporation. I should be deceived just in the same way if a similar condition came up again, if I have been deceived. I could not help taking a thing of that kind as an index, what Mr. Hill and the Steel Corporation considered the value of the ore.

Mr. BARTLETT. I do not think you made any mistake about it.

Mr. MUNSEY. If I did, I did it honestly.

Mr. YOUNG. I suppose you took into account the fact that the price paid was upon a royalty basis?

Mr. MUNSEY. Yes, you could take 85 cents as a basis.

Mr. YOUNG. And you reduced this to 60 cents to make a cash basis for deferred payments?

Mr. MUNSEY. Yes. You see, you could take 85 cents, the price at which it started. All he added year by year was the interest.

Mr. YOUNG. Yes.

Mr. MUNSEY. So you can take 85 cents a ton as the price. On that same theory I made the price of this other ore, which was said to be equally good, or better—I made it 60 cents; I had no knowledge of whether the Steel Corporation—I had no knowledge whether they wanted to—but what they might have had some motive in not making the stock as high as it should be. I knew nothing about that, and consequently I used my best judgment in connection with all the facts at my command as to what was a safe value for that ore. That would seem to me, as a magazine man, to be sounder than it would to take figures that anybody gave you without using your judgment.

Mr. YOUNG. Undoubtedly.

Mr. MUNSEY. That is what I exercised, was my judgment, and the great guide was the Hill contract.

Mr. YOUNG. I don't think you are so far off on the value of that ore, myself.

Mr. Bartlett. I think the evidence before this committee rather justifies that conclusion.

The Chairman. As far as the Tennessee Coal & Iron Co. is concerned.

Mr. Bartlett. Yes.

Mr. Reed. I want to call your attention to those pages in Mr. Givens's testimony, in which he gave the various royalties that were paid on coal in the Birmingham district. I find that he discussed the matter on pages 1003, 1004, 1005, and 1006, and he gave the royalties in the different districts. They range from 3 cents to 10 cents a ton.

The Chairman. That was my recollection, that the available coal—where the thickness of the seam and the like of that was such as to make it available—was worth 10 cents a ton. Do you remember the amount of that that he fixed at 10 cents a ton?

Mr. Reed. My recollection was that the chairman said this morning that his impression of the testimony was that it showed royalties exceeding 10 cents a ton.

The Chairman. No; I said approximately 10 cents a ton. I never heard of any ores down there exceeding 10 cents a ton. I am utterly indifferent, for the purposes of this inquiry, whether that 2,000-000,000 tons of ore was worth 5 or 10 cents.

Mr. Young. I see that the chairman still sticks to his basis of 2,000,000,000 tons.

Mr. Reed. I think the chairman was misled by that report of 1906, which was issued by these experienced steel men who had stock to sell.

Mr. Bartlett. Would the fact that the Steel Co. has determined to cancel the Hill lease affect your judgment now, Mr. Munsey?

Mr. Munsey. I should not regard it as valuable to-day as I thought at that time. After I receded somewhat from that contract and had time to think it over, I was not very favorable toward it as a stockholder in the company.

The Chairman. I should not think you would have been.

Mr. Munsey. In the first flush of it—in the general conversation with men I met in New York, it was a very important thing.

The Chairman. That Hill lease is like the mysteries of godland something I eagerly yearn to know, and have tried in vain to fathom You are in the councils of the great among them. When you were there preparing this report and they were revealing these great secrets of that mysterious concern, did you ever hear any gossip about who were for and who were against the Hill ore lease?

Mr. Munsey. I never did.

The Chairman. Not a word?

Mr. Munsey. I never did.

The Chairman. Did you ever hear that Morgan and one or two others favored it, and that Mr. Gailey, who was very experienced, and other men up on the Lakes all swore and charged and said that it was milking this corporation and was endangering its property, and that it was plundering its assets and all that sort of thing, but that a strong hand said, "this contract must be signed," and after many wounds and bruises, much talk and protestation, it was signed—did you ever hear anything like that?

Mr. Munsey. I never heard anything of that sort in my life.

Mr. YOUNG. Does the chairman mean to say that there is any evidence of that sort before this committee?

The CHAIRMAN. No, sir; I do not. I asked him if he had ever heard anything of that kind. I have heard it in New York, and I have heard it upon the ranges. I thought maybe he was closer to them than I was, although I think a great deal of these steel people, and that maybe he had really gotten things and been taken into their confidence.

Mr. MUNSEY. No; I never heard a word about that.

Mr. YOUNG. If the chairman has such information as that, I think it would be of his duty to bring it before this committee.

Mr. REED. If the chairman will give us the name of his informant——

The CHAIRMAN. Well, now, let me ask you, Mr. Reed, was there not a decided difference of opinion between the various men at the head of the United States Steel Corporation as to the propriety of making the Hill ore lease?

Mr. REED. I don't know. I was not in New York at that time.

The CHAIRMAN. However, haven't you ever heard that there was that difference of opinion?

Mr. REED. I just heard it from you.

The CHAIRMAN. Haven't you ever heard it from anybody else?

Mr. REED. I am not a witness, Mr. Chairman.

The CHAIRMAN. And I would not make you one.

Mr. BARTLETT. Now, Mr. Munsey, as a stockholder, do you think the interests of the company would be subserved by the cancellation of that lease, upon the ground that it was too high a price to pay; is that right?

Mr. MUNSEY. As a layman, without knowing anything about the situation scientifically, I should say "Yes"; that would be my idea. If I had to vote on a thing like that, however, I should want to know what I would have to guess at.

Mr. BARTLETT. Knowing the character of the men who are in charge of the business of the United States Steel Corporation, you are confident that they have given notice of their desire to cancel this lease, taking advantage of the terms of the lease, because they do not believe it to be profitable—to be a profitable investment for this company?

Mr. MUNSEY. I should so interpret their actions. I do not believe they have ever taken out a great deal of it.

Mr. BARTLETT. Did you know at the time of this article that the lease provided for cancellation?

Mr. MUNSEY. Yes.

Mr. BARTLETT. You knew that?

Mr. MUNSEY. Yes; I think I did. I do not remember that. I have known it quite a long time, but whether or not I knew it at that time I don't know.

Mr. BARTLETT. That is all I have.

The CHAIRMAN. That is all.

Mr. YOUNG. I haven't anything further.

The CHAIRMAN. Mr. Munsey, we are deeply grateful to you for your kindness in appearing before the committee, and I hope we have not inconvenienced you.

Mr. Munsey. I am deeply grateful to you for your courtesy and very nice treatment.

The Chairman. We will adjourn now until half past 10 to-morrow morning.

Whereupon, at 4.05 p. m., on the 29th day of March, 1912, an adjournment was taken until 10.30 a. m., March 30, 1912.

TENTH ANNUAL REPORT OF THE UNITED STATES STEEL CORPORATION FOR THE FISCAL YEAR ENDED DECEMBER 31, 1911.

Directors.—Term expires 1912: Henry C. Frick, William H. Moore, Norman B. Ream, James H. Reed, Percival Roberts, jr., Charles Steele, Peter A. B. Widener, Robert Winsor. Term expires 1913: Alfred Clifford, Edmund C. Converse, James A. Farrell, Elbert H. Gary (chairman), J. Pierpont Morgan, J. Pierpont Morgan, jr., George W. Perkins, Henry Phipps. Term expires 1914: George F. Baker, William E. Corey, Clement A. Griscom, Gardiner M. Lane, Samuel Mather, Daniel G. Reid, Henry Walters.

Finance committee.—Elbert H. Gray (chairman), George F. Baker, Henry C. Frick, J. Pierpont Morgan, jr., George W. Perkins, Henry Phipps, Norman B. Ream, Percival Roberts, jr., Peter A. B. Widener.

Executive officers.—Elbert H. Gary, chairman, New York, N. Y.; James A. Farrell, president, New York, N. Y.; David G. Kerr, vice president, New York, N. Y.; John Reis, vice president, New York, N. Y.; Francis Lynde Stetson, general counsel, New York, N. Y.; Richard Trimble, secretary and treasurer, New York, N. Y.; William J. Filbert, comptroller, New York, N. Y.

Fiscal agents.—J. P. Morgan & Co., New York, N. Y.

Stock transfer department.—71 Broadway, New York, N. Y.; 51 Newark Street, Hoboken, N. J.

Registrars of stock.—For preferred stock: The New York Trust Co., New York, N. Y. For common stock: Guaranty Trust Co. of New York, New York, N. Y.

General offices.—51 Newark Street, Hoboken, N. J.

Office of United States Steel Corporation,
51 Newark Street,
Hoboken, N. J., March 19, 1912.

To the stockholders:

The board of directors submits herewith a combined report of the operations and affairs of the United States Steel Corporation and subsidiary companies for the fiscal year which ended December 31, 1911, together with a statement of the condition of the finances and property at the close of that year.

Income account for the year 1911.

The total earnings of all properties after deducting all expenses incident to operations, including those for ordinary repairs and maintenance (approximately $38,000,000), employees' special compensation under bonus plan, allowance for Federal excise tax, payable in 1912, and also interest on bonds and fixed charges of the subsidiary companies, amounted to		$104, 305, 465. 87
Less charges and allowances for depreciation, viz:		
Sinking funds on bonds of subsidiary companies	$1, 610, 038. 99	
Depreciation and extraordinary replacement funds	18, 229, 059. 76	
		19, 839, 098. 75
Net earnings in the year 1911		84, 466, 367. 12

Deduct:			
Interest on United States Steel Corporation bonds outstanding, viz:			
50-year 5 per cent gold bonds		$13,613,064.64	
10-60 year 5 per cent gold bonds		9,493,858.48	
Sinking funds on United States Steel Corporation bonds, viz (representing an allowance for depreciation in addition to the $19,839,098.75 deducted above):			
Installment on 50-year 5 per cent gold bonds	$3,040,000.00		
Installment on 10-60 year 5 per cent gold bonds	1,010,000.00		
Interest on above bonds in sinking funds	2,090,926.88		
		6,140,926.88	
			$29,247,850.00
Add: Net balance of sundry credits and charges, including adjustments of various accounts			81,779.66
Total			55,300,296.78
Dividends for the year 1911 on United States Steel Corporation stocks, viz:			
Preferred, 7 per cent		$25,219,677.00	
Common, 5 per cent		25,415,125.00	
			50,634,802.00
Surplus net income for the year			4,665,494.78

Undivided surplus of United States Steel Corporation and subsidiary companies (since Apr. 1, 1901).

Surplus or working capital provided in organization			$25,000,000.00
Balance of surplus accumulated by all companies from Apr. 1, 1901, to Dec, 31, 1910, exclusive of subsidiary companies' intercompany profits in inventories, per annual report for year 1910		$105,438,718.67	
Less charges to and appropriations from the foregoing balance during the year 1911, viz:			
Discount in sale of subsidiary companies' bonds	$750,000.00		
Appropriation for permanent pension fund	663,018.37		
		1,413,018.37	
		104,025,700.30	
Surplus net income for the year 1911, as above		4,665,494.78	
			108,691,195.08
Total undivided surplus Dec. 31, 1911, exclusive of profits earned by subsidiary companies on intercompany sales of products on hand in inventories (see note below)			133,691,195.08

NOTE.—The surplus of subsidiary companies representing profits accrued on sales of materials and products to other subsidiary companies and on hand in latter's inventories, which in previous years was carried as a part of the surplus, is now stated as a deduction from the amount of inventories included under Current Assets. (See Consolidated general balance sheet, p. 5254.)

Comparative income account for the fiscal years ended Dec. 31, 1911 and 1910.

	1911	1910	Increase (+) or decrease (−).
Earnings	$104,305,465.87	$141,054,754.51	−$36,749,288.64
Less charges and allowances for depreciation, viz:			
Sinking funds on bonds of subsidiary companies.	1,610,038.99	2,176,041.18	− 566,002.19
Depreciation and extraordinary replacement funds	18,229,059.76	22,140,555.53	− 3,911,495.77
Net earnings in the year	84,466,367.12	116,738,157.80	− 32,271,790.68
Deduct:			
Interest on United States Steel Corporation bonds outstanding	23,106,923.12	23,366,760.53	− 259,837.41
Sinking funds on United States Steel Corporation bonds, viz:			
Installments	4,050,000.00	4,050,000.00	
Interest on bonds in sinking funds	2,090,926.88	1,831,089.47	+ 259,837.41
	55,218,517.12	87,490,307.80	− 32,271,790.68
Add net balance of sundry credits and charges, including adjustments of various accounts	Cr. 81,779.66	Dr. 83,122.98	+ 164,902.64
Balance	55,300,296.78	87,407,184.82	− 32,106,888.04
Dividends on United States Steel Corporation stocks, viz:			
Preferred, 7 per cent	25,219,677.00	25,219,677.00	
Common, 5 per cent	25,415,125.00	25,415,125.00	
Surplus net income for the year	4,665 494.78	36,772,382.82	− 32,106,888.04
Appropriated from surplus net income for the following purposes, viz:			
On account of expenditures made on authorized appropriation for additional property, new plants and construction, and for discharge of capital obligations		15,000,000.00	− 15,000,000.00
Specifically set aside for account of construction expenditures at Gary, Ind., plant		10,000,000.00	− 10,000,000.00
For reserve fund to cover advanced mining royalties		1,000,000.00	− 1,000,000.00
Balance of surplus for the year	4,665,494.78	10,772,382.82	− 6,106,888.04

Net profits and undivided surplus of United States Steel Corporation and subsidiary companies at close of each of the periods named.

[Includes only surplus received or earned on or subsequent to Apr. 1, 1901.]

Period.	Net profits for period available for dividends.	Surplus at close of period before declaration of dividends.[1]	Dividends on United States Steel Corporation stock for respective periods.	Appropriations to cover capital expenditures, for special funds, and sundry credits and charges.	Balance.	
					Undivided surplus, exclusive of intercompany profits in inventories.	Surplus representing intercompany profits in inventories.
9 months, 1901	$60,600,109.05	$85,600,109.05	$41,979,168.75		$43,620,940.30	
Year 1902	90,306,524.25	133,927,464.55	56,052,867.50		77,874,597.05	
Year 1903	68,462,549.52	146,337,146.57	43,111,735.91	$37,128,728.30	55,724,879.11	$10,371,803.25
Year 1904	31,450,901.31	96,293,247.19	25,219,677.00	9,708,124.50	52,247,978.92	9,117,466.77
Year 1905	68,684,745.93	136,357,381.45	25,219,677.00	26,399,253.78	69,313,794.07	15,424,656.60
Year 1906	98,219,088.13	185,696,942.54	35,385,727.00	52,590,501.19	79,556,654.01	18,164,060.34
Quarter ending:						
Mar. 31, 1907	27,031,008.20	118,256,429.88	8,846,431.75	14,500,000.00	83,241,230.46	11,668,767.67
June 30, 1907	30,843,512.61	131,134,185.12	8,846,431.75	18,500,000.00	86,738,311.32	17,049,442.05
Sept. 30, 1907	28,758,142.27	140,376,218.82	8,846,431.75	15,000,000.00	91,650,021.84	24,879,765.23
Dec. 31, 1907	18,614,416.20	138,173,190.89	8,846,431.75	6,681,515.52	94,736,490.77	27,908,752.85
Mar. 31, 1908	8,854,297.37	127,092,583.20	8,846,431.75		94,744,356.39	23,501,795.06
June 30, 1908	9,042,027.55	125,937,322.46	8,846,431.75		94,939,952.19	22,150,938.52
Sept. 30, 1908	13,998,455.19	137,506,368.22	8,846,431.75		100,091,975.63	28,567,960.84
Dec. 31, 1908	13,739,899.00	142,167,611.33	8,846,431.75	Cr. 94,034.59	105,079,477.47	28,335,736.70
Mar 31, 1909	11,873,107.35	142,482,808.58	8,846,431.75		108,106,153.07	25,530,223.76
June 30, 1909	16,011,432.78	149,096,537.52	10,117,188.00		114,000,397.85	24,978,951.67
Sept. 30, 1909	23,543,056.48	170,258,048.93	11,387,944.25		126,155,510.08	32,714,594.60
Dec. 31, 1909	27,097,653.35	184,206,295.67	[2] 15,200,213.00	17,651,554.92	120,401,395.51	30,953,132.24
Mar. 31, 1910	24,191,232.18	167,473,663.41	12,658,700.50	5,000,000.00	126,933,927.19	22,881,035.72
June 30, 1910	26,568,793.11	180,372,252.35	12,658,700.50	7,500,000.00	133,344,019.80	26,869,532.05
Sept. 30, 1910	23,736,762.55	193,557,902.82	12,658,700.50	7,500,000.00	136,922,081.85	36,477,120.47
Dec. 31, 1910	12,993,519.96	183,620,041.13	12,658,700.50	6,818,182.64	130,438,718.67	33,704,439.32
Mar. 31, 1911	12,689,854.44	169,816,095.19	12,658,700.50		130,469,872.61	26,687,522.08
June 30, 1911	14,527,877.24	169,879,556.73	12,658,700.50		132,339,049.35	24,881,806.88
Sept. 30, 1911	15,404,194.28	175,370,267.02	12,658,700.50		135,084,543.13	27,627,023.39
Dec. 31, 1911	12,596,591.16	170,264,734.18	12,658,700.50	1,331,238.71	133,691,195.08	22,583,599.80

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[1] Includes capital surplus of $25,000,000 provided at date of organization, also surplus of subsidiary companies representing accrued profits on intercompany materials on hand in inventories.

[2] Includes extra of ¾ per cent on common for year 1909.

Summary—Apr. 1, 1901, to Dec. 31, 1911.

Capital surplus provided at date of organization			$25,000,000.00
Aggregate net profits as above		$789,839,751.46	
Less—			
Amount included therein representing accrued profits on intercompany materials on hand in inventories	$10,371,803.25		
Net charges against profits made at close of fiscal years, not applicable to particular quarters or years	8,720,641.42		
Reserved for fund to cover possible failure to realize advanced mining royalties	7,000,000.00		
		26,092,444.67	
Balance of profits			763,747,306.79
			788,747,306.79
Dividends paid on United States Steel Corporation stocks, viz:			
Preferred, 75¼ per cent		$294,634,305.66	
Common, 29½ per cent		149,927,382.50	
			444,561,688.16
Leaving a surplus of			344,185,618.63
Of the foregoing surplus there has been appropriated for payment of capital expenditures and special charges			210,494,423.55
Balance of surplus Dec. 31, 1911, exclusive of profits earned by subsidiary companies on intercompany sales of products on hand in inventories (see note below)			133,691,195.08

NOTE.—The surplus of subsidiary companies representing profits accrued on sales of materials and products to other subsidiary companies and on hand in latter's inventories, shown separately in above table, and which in previous years was carried as a part of the surplus, is now stated as a deduction from the amount of inventories included under current assets. See consolidated general balance sheet, p. 5254.).

MAINTENANCE, RENEWALS, AND EXTRAORDINARY REPLACEMENTS.

The expenditures made by all companies during the year 1911 for maintenance and renewals, including the relining of blast furnaces and for extraordinary replacements, in comparison with expenditures for the same purposes during the preceding year, were as follows:

	1911	1910	Decrease.	Per cent (decrease).
Ordinary maintenance and repairs	$37,882,850.77	$40,818,899.32	$2,936,048.55	7.2
Extraordinary replacements	7,077,414.37	8,489,285.64	1,411,871.27	16.6
Total	44,960,265.14	49,308,184.96	4,347,919.82	8.8

The entire amount of the foregoing expenditures was charged to current operating expenses and to depreciation and replacement funds received from earnings. A summary showing the particulars of the principal expenditures for replacement and betterment, comprehended in the above total outlays for extraordinary replacements, is given on pages 5264–5268 of this report.

The following table shows the amount of the expenditures made during the year for above purposes on the respective groups of operating properties:

Expended on—	Expenditures during the year 1911.			Total expenditures in previous year.	Decrease.
	Ordinary maintenance and repairs, including blast furnace relinings.	Extraordinary replacements.[1]	Total.		
Manufacturing properties:					
Total, except blast furnace relining and renewals	$23,933,416.50	$4,690,322.87	$28,623,739.37	$30,228,391.73	$1,604,652.36
Blast furnace relining and renewals	1,541,354.38	....	1,541,354.38	2,046,019.10	504,664.72
Coal and coke properties	2,016,308.09	575,872.46	2,592,180.55	2,908,180.30	315,999.75
Iron-ore properties	754,693.37	98,628.25	853,321.62	1,249,911.07	396,589.45
Transportation properties:					
Railroads	8,703,071.66	1,176,353.73	9,879,425.39	10,993,184.28	1,113,758.89
Steamships and docks	623,777.89	527,702.91	1,151,480.80	1,468,952.84	317,472.04
Miscellaneous properties	310,228.88	8,534.15	318,763.03	413,545.64	94,782.61
Total expended in 1911	37,882,850.77	7,077,414.37	44,960,265.14	....	....
Total expended in 1910	40,818,899.32	8,489,285.64	....	49,308,184.96	....
Decrease in 1911	2,936,048.55	1,411,871.27	....	....	4,347,919.82

[1] These expenditures were paid from funds provided from earnings to cover requirements of the character included herein, as see table below

BOND SINKING, DEPRECIATION, AND EXTRAORDINARY REPLACEMENT FUNDS.

The allowances made during the year ending December 31, 1911, from earnings and through charges to current operating expenses for account of these funds, the income received by the funds from other sources, also the payments and expenditures made therefrom and the charges made thereto during the year, together with the balances to credit of the funds at December 31, 1911, are shown in the subjoined table:

Funds.	Credits to funds.				Payments from and charges to funds in 1911.	Balances to credit of funds Dec. 31, 1911.
	Balances Dec. 31, 1910.	Set aside during 1911 from income and by charges to current ex-expenses.	Other income and credits, including salvage.	Total.		
Accrued sinking funds on United States Steel Corporation bonds	$3,052,880.54	$6,140,926.88	$6,214.93	$9,200,022.35	[1] $6,075,592.26	$3,124,430.09
Accrued sinking funds on bonds of subsidiary companies	407,791.83	1,610,038.99	[2] 889,779.40	2,907,610.22	[1] 2,490,808.57	416,801.65
Total of foregoing	3,460,672.37	7,750,965.87	895,994.33	12,107,632.57	8,566,400.83	3,541,231.74
Depreciation and extraordinary replacement funds	56,649,652.58	18,229,059.76	[3] [4] 399,884.70	74,478,827.64	[5] 12,249,978.37	62,228,849.27
Blast furnace relining and renewal funds	5,692,498.82	1,813,184.58	....	7,505,683.40	[6] 1,541,354.38	5,964,329.02
Grand total	65,802,823.77	27,793,210.21	496,109.63	94,092,143.61	22,357,733.58	71,734,410.03

[1] Payments to trustees of bond sinking funds.

[2] [3] These totals include, respectively, a credit and charge of $885,460 for depreciation and extraordinary replacement funds transferred and applied account bond sinking funds.

[4] Debit.

[5] This total covers expenditures and charges made, viz:

Expenditures made during 1911 for extraordinary replacements (see p. 5264)		$7,077,414.37
Amounts charged off (and credited property account) for payments from these funds for:		
Expenditures for additional property and construction	$1,989,887.51	
Bonds, mortgages, and purchase obligations retired	2,997,860.20	
		4,987,747.71
Write-off to credit of property account of sundry depreciation		184,816.29
		12,249,978.37

[6] Expenditures made during 1911 for relining and renewals at blast furnaces.

SUMMARY OF DEPRECIATION PROVIDED FROM GROSS INCOME FOR THE YEAR 1911.

The aggregate amount of charges to and allowances from gross earnings during the year to cover deterioration arising from wear and tear of improvements, exhaustion of minerals, and for obsolescence was as follows:

Outlays for repairs and renewals (other than blast furnace relinings and renewals) charged to current operating expenses and deducted before stating earnings	$36,341,496.39
Allowances for blast furnace relinings and renewals charged to current operating expenses and deducted before stating earnings	1,813,184.58
Allowances made from earnings and income for bond sinking and for depreciation and replacement funds	25,980,025.63
Total	64,134,706.60

TRUSTEES OF BOND SINKING FUNDS.

The trustees' transactions for account of the bond sinking funds of the United States Steel Corporation and subsidiary companies for the year, and the condition of the funds on December 31, 1911, are shown in the following table:

Funds.	Cash resources in hands of trustees Dec. 31, 1910.	Installments received.	Interest accretions and other receipts.	Total.	Bonds redeemed and other payments.		Cash resources in hands of trustees Dec. 31, 1911.
					Par value of bonds.	Net premium paid on bonds redeemed.	
United States Steel Corporation bonds	$202,807.08	$4,050,000.00	$2,025,592.26	$6,278,399.34	$5,566,000	$692,566.25	$19,833.09
Subsidiary companies' bonds	653,711.92	1,850,473.28	740,057.23	3,244,242.43	2.185.000	104,424.51	954,817.92
Total	856,519.00	5.900,473.28	2.765,649.49	9,522,641.77	7,751.000	796,990.76	974,651.01

NOTE.—The installments received by the trustees include a cash deposit of $72,400 not paid from funds provided from income. The item of "Interest accretions and other receipts" embraces $2,748,347.99 of interest accretions (of which $10,020.44 were not paid from funds provided from income) and $17,301.50 of proceeds from sale of property.

Redeemed bonds held by trustees of sinking funds.

	United States Steel Corporation bonds.	Subsidiary companies' bonds.	Total.
Total redeemed bonds at par, held by the trustees on Dec. 31, 1910	$38,767.500	$12,874.000	$51,641,500
Redeemed in 1911 as above	5.566.000	2,185,000	7,751,000
	44,333,500	15,059,000	59.392,500
Less canceled by the trustees during the year and returned to the companies		484.000	484.000
Leaving redeemed bonds held by the trustees of sinking funds Dec. 31, 1911	44,333,500	14,575.000	58,908,500

An amount equal to the annual interest on the above-redeemed bonds held by the trustees is currently paid into the sinking funds in addition to the fixed installments provided by the respective mortgages.

CAPITAL STOCK.

The amount of outstanding capital stock of the United States Steel Corporation on December 31, 1911, was the same as at the close of the preceding fiscal year, as follows:

Common stock	$508,302,500.00
Preferred stock	360,281,100.00

Bonded, debenture, and mortgage debt.

The total bonded, debenture, and mortgage debt of the United States Steel Corporation and subsidiary companies outstanding on Jan. 1, 1911, was		$597,136,659.08
Issues were made during the year as follows, viz:		
In lieu of other bonds surrendered for exchange—		
Union Steel Co. first-mortgage and collateral-trust bonds (issued in exchange for Sharon Steel & Sharon Coke Co. bonds, retired)	$172,000.00	
Tennessee Coal, Iron & R. R. Co. general-mortgage bonds (issued in lieu of De Bardeleben Coal & Iron Co. first-mortgage bonds, retired)	7,000.00	
		179,000.00
Bonds issued or assumed by subsidiary companies in connection with purchase of property—		
By H. C. Frick Coke Co., Pittsburgh-Monongahela first lien purchase money bonds	17,712,000.00	
By United States Steel Products Co., Risdon Iron & Locomotive Works first-mortgage bonds	600,000.00	
		18,312,000.00
Subsidiary companies' bonds issued and sold for account of construction expenditures and in refunding matured bonds—		
Illinois Steel Co. debenture gold bonds of 1940	10,000,000.00	
Union R. R. Co., Mifflin equipment trust bonds	700,000.00	
Bessemer & Lake Erie R. R. Co., Meadville equipment trust bonds	550,000.00	
Duluth & Iron Range R. R. Co. first-mortgage bonds	1,419,000.00	
Duluth, Missabe & Northern Ry. Co. general-mortgage bonds	2,160,000.00	
		14,829,000.00
Subsidiary companies' bonds sold to trustees of sinking funds—		
Tennessee Coal, Iron & R. R. Co. general-mortgage bonds	71,000.00	
Youghgahela Water Co. first-mortgage bonds.	25,000.00	
		96,000.00
Bonds and mortgages retired or acquired during the year, viz:		
Lorain Steel Co., the Johnson Co. first-mortgage bonds	105,000.00	
American Steel & Wire Co., Allegheny Furnace Co. mortgage	78,000.00	
Illinois Steel Co., 5 per cent debentures of 1910	15,000.00	
Clairton Steel Co.—		
5 per cent mortgage bonds	499,000.00	
St. Clair Furnace Co. first-mortgage bonds	100,000.00	
St. Clair Steel Co. first-mortgage bonds	100,000.00	
Union Steel Co.—		
Sharon Steel Co. first-mortgage bonds	54,000.00	
Sharon Steel Co. collateral-trust and mortgage bonds	239,000.00	
Sharon Coke Co. first-mortgage bonds	1,000.00	
Tennessee Coal, Iron & R. R. Co., De Bardeleben Coal & Iron Co. first-mortgage bonds	7,000.00	
H. C. Frick Coke Co.—		
First-mortgage bonds	100,000.00	
Continental Coke Co. purchase-money mortgage bonds	37,000.00	
Pennsylvania & Lake Erie Dock Co. mortgage bonds	38,950.00	

Bonds and mortgages retired or acquired during the year, viz—Continued.			
Bessemer & Lake Erie R. R. national equipment trust bonds		40,000.00	
Pittsburgh, Bessemer & Lake Erie R. R. Co.—			
Shenango equipment trust bonds	$73,000.00		
Greenville equipment trust bonds	100,000.00		
	173,000.00		
Less proportion account of minority interest in stock of Pittsburgh, Bessemer & Lake Erie R. R. Co	82,730.33		
		90,269.67	
Illinois Steel Co. debenture scrip		270.20	
Sundry real-estate mortgages of various companies		231,869.59	
		1,736,359.46	
Bonds purchased by trustees of sinking funds, viz:			
United States Steel Corporation 50-year 5 per cent bonds	$4,135,000.00		
United States Steel Corporation 10–60-year 5 per cent bonds	1,431,000.00		
Union Steel Co. first-mortgage and collateral-trust bonds	1,056,000.00		
Duluth, Missabe & Northern Ry. Co.—			
Consolidated first-mortgage bonds	138,000.00		
General-mortgage bonds	204,000.00		
Connellsville & Monongahela Ry. Co. first-mortgage bonds	30,000.00		
American Steamship Co. first-mortgage bonds	273,000.00		
Pittsburgh Steamship Co. first-mortgage bonds	187,000.00		
Tennessee Coal, Iron & R. R. Co. general-mortgage bonds	71,000.00		
Schoen Steel Wheel Co. first-mortgage bonds	76,000.00		
Sharon Coke Co. firs-tmortgage bonds	37,000.00		
Hostetter-Connellsville Coke Co. first mortgage bonds	39,000.00		
Little Vermilion Coal Co. first-mortgage bonds	18,000.00		
Youghgahela Water Co. first-mortgage bonds	25,000.00		
St. Clair Terminal R. R. Co. first-mortgage bonds	31,000.00		
		7,751,000.00	
		9,487,359.46	
Potter Ore Co. first mortgage bonds retired by that company (Tennessee Coal, Iron & R. R. Co.'s proportion)		11,000.00	
			9,498,359.46
Bonded, debenture, and mortgage debt Dec. 31, 1911			621,054,299.26
Net increase during the year ending Dec. 31, 1911			23,917,640.54

A detailed schedule of the various issues of bonds outstanding on December 31, 1911, also of bonds held by trustees of sinking funds, the interest on which is currently paid into the sinking funds, will be found on page 36. The following is a summary by general classes of the total bonded, debenture, and mortgage debt:

	Total, including bonds in sinking funds.	Less redeemed and held by trustees of sinking funds.	Balance outstanding.
United States Steel Corporation 50-year 5 per cent bonds	$303,957,000.00	$33,680,000.00	$270,277,000.00
United States Steel Corporation 10-60-year 5 per cent bonds	200,000,000.00	10,653,500.00	189,346,500.00
Total United States Steel Corporation bonds	503,957,000.00	44,333,500.00	459,623,500.00
Subsidiary companies' bonds guaranteed by United States Steel Corporation	88,130,000.00	9,227,000.00	78,903,000.00
Subsidiary companies' bonds not guaranteed by United States Steel Corporation	87,291,441.84	5,348,000.00	[1] 81,943,441.84
Debenture scrip, Illinois Steel Co	31,434.99		31,434.99
Total subsidiary companies' bonds and debentures	175,452,876.83	14,575,000.00	160,877,876.83
Total bonded and debenture debt	679,409,876.83	58,908,500.00	620,501,376.83
Sundry real-estate mortgages	552,922.79		552,922.79
Grand total bonded, debenture, and mortgage debt	679,962,799.62	58,908,500.00	621,054,299.62

[1] Includes only the proportion of bonds of Pittsburgh, Bessemer & Lake Erie R. R. Co. outstanding account of the majority interest in stock of that company owned by a subsidiary company of United States Steel Corporation. (See table on pages 5261-5263.)

From April 1, 1901, to December 31, 1911, the amount of bonds and mortgages paid and retired by all companies was as follows:

Bonds and mortgages paid and retired with moneys from depreciation funds and surplus income	$21,593,657.78
Bonds purchased and retired with bond sinking funds provided from earnings	62,274,284.15
Total	83,867,941.93

During the same period there were issued, sold, and assumed by subsidiary companies bonds and mortgages to provide funds for new property and construction work and for refunding maturing bonds as follows, viz:

For Pittsburgh-Monongahela coal purchase		$17,712,000.00
By Union Steel Co. to provide funds for part payment of cost of completing construction work at Donora and South Sharon under way when United States Steel Corporation acquired that company's stock		9,168,727.79
By sundry subsidiary companies		47,253,138.41
Total		74,133,866.20
Bonds have also been issued by subsidiary companies for funding unsecured indebtedness and for working capital to the amount of		985,795.00
There were also issued and sold during the period named (1901-1911) United States Steel Corporation 10-60-year 5 per cent bonds as follows:		
For account construction and capital expenditures	$20,000,000.00	
For account purchase of stock of Tennessee Coal, Iron & R. R. Co	30,000,000.00	50,000,000.00

TREASURY BONDS SUBJECT TO SALE.

There were on hand at the close of the year in the treasury, available for sale, bonds and debentures of subsidiary companies of the par value of $964,000, as listed in table on page 210. The foregoing bonds were issued by subsidiary companies to provide funds for construction and in lieu of bonds redeemed at maturity. The bonds have been purchased from the subsidiary companies issuing the same by the United States

Steel Corporation or by other subsidiary companies and are not, therefore, included in the schedule of outstanding bonds nor in the assets of the organization as shown by the general balance sheet.

There may also be issued at any time to cover capital expenditures made, Union Steel Co. first mortgage and collateral trust bonds, to the amount of $362,000.

PURCHASE-MONEY OBLIGATIONS, BILLS PAYABLE, AND SPECIAL DEPOSITS OR LOANS.

During the year 1911 payments were made in the discharge of purchase-money obligations and bills payable, as follows, viz:

Purchase-money obligations	$1,713,000.00
Bills payable	771,756.41
	2,484,756.41
And there was an increase during the year in the liability account for special deposits or loans of	25,457.98
Net reduction during the year in amount of above-named liabilities	2,459,298.43

The outstanding liabilities of the above classes at December 31, 1911, in comparison with amounts outstanding at close of the preceding year, were as follows:

	Outstanding Dec. 31, 1911.	Outstanding Dec. 31, 1910.	Increase (+) or decrease (−).
Purchase-money obligations	$600,000.00	$2,313,000.00	−$1,713,000.00
Bills payable	41,743.59	813,500.00	− 771,756.41
Special deposits os loans	911,580.14	886,122.16	+ 25,457.98
Total	1,553,323.73	4,012,622.16	− 2,459,298.43

Since April 1, 1901, there has been paid off an amount of liabilities of the above character of $49,293,744.86. During the same period purchase obligations to the amount of $5,403,528.20 were issued in connection with the acquirement of additional fixed property and other investments. Of the total amount paid off as aforesaid, the sum of $11,214,745.98 represents moneys originally borrowed by subsidiary companies, or received, and used as working capital; the balance, $38,078,998.88, represents specific obligations originally incurred in the acquirement of property, or for moneys used for the purchase of property or the discharge of capital liabilities.

INVENTORIES OF MANUFACTURING AND OPERATING MATERIALS AND SUPPLIES AND SEMIFINISHED AND FINISHED PRODUCTS, INCLUDING NET ADVANCES ON CONTRACT WORK, ETC.

The total book valuation of the inventories of the above classes of assets for all of the properties equaled at December 31, 1911, the sum of $176,067,189, a decrease in comparison with the total at the close of the preceding year of $470,635.

Inventory valuations as above stated are on the basis of the actual purchase or production cost of the materials to the respective subsidiary companies holding the same, unless such cost was above the market value on December 31, 1911, in which case the market price was used. But as stated in previous annual reports the valuations on the basis indicated include, in respect of such commodities in stock at the close of the year as had been purchased by one subsidiary company from another, an amount of profits accrued thereon to the subsidiaries selling the same or furnishing service in connection therewith. Theses profits are not, however, carried into the currently reported earnings of the entire organization until converted into cash or a cash asset to it, being meanwhile segregated and carried in a specific surplus account which is practically a guaranty fund for these profits so locked up in inventories pending their realization in cash. In order to prevent the accounts on even a more conservative basis than heretofore observed, it was decided in this year's consolidated general balance sheet to state the amount of the specific surplus account referred to as a reduction in the total valuation at which all inventories are carried in current assets. (See balance sheet, p. 5254.) Accordingly, in the subjoined table the surplus account in question is likewise shown. This plan results in there being carried in the combined assets for all of the companies, the inventories of those materials and products on hand which have been transferred and sold from one subsidiary company to another, at net values which are substantially the production cost to the respective subsidiary companies furnishing the same. The net valuation thus obtained and shown for the total inventories of all materials and products is largely below the market value of the same.

The following is a general classification of the inventory valuations at December 31, 1911, in comparison with the valuations at the close of the preceding year:

		Dec. 31, 1911.	Dec. 31, 1910.
Ores		$73,642,448	$80,345,434
Pig iron, scrap, ferro, and spiegel		6,998,670	7,348,570
Coal, coke, and other fuel		3,728,595	4,282,791
Pig tin, spelter, copper, nickel, aluminum, and dross and skimmings		6,536,069	5,385,399
Limestone, fluxes and refractories		2,000,130	2,281,845
Rolls, molds, stools, annealing boxes, etc		6,101,885	5,776,398
Manufacturing supplies, stores, and sundry items not otherwise classified		13,682,475	13,467,993
Ingots, steel		1,278,318	1,001,785
Blooms, billets, slabs, sheet and tin plate bars, etc		7,756,691	7,755,479
Wire rods		829,461	941,101
Skelp		968,516	910,598
Finished products		32,737,559	31,913,767
Mining supplies and stores (for ore and coal properties)		3,163,242	3,183,109
Railroad supplies and stores		3,350,134	3,631,629
Merchandise of supply companies		748,004	771,429
Material, labor, and expense locked up in bridge and structural contracts	$19,989,678		
Less bills rendered on account	14,588,385		
		5,401,293	2,649,990
Stocks abroad and on consignment		5,351,377	3,957,616
Material in transit		1,792,322	1,390,365
Bills rendered account work done on sundry material in process of manufacture			Cr. 457,474
Total inventory valuations to subsidiary companies		176,067,189	176,537,824
Amount included therein representing profits of subsidiary companies on intercompany sales of materials and products on hand		22,583,600	33,704,439
Valuation, exclusive of intercompany profits		153,483,589	142,833,385

PRODUCTION.

The production of the subsidiary companies for the year 1911, compared with the year 1910, was as follows:

Products.	1911	1910
Iron ore mined:		
In the Lake Superior ore region—	*Tons.*	*Tons.*
Marquette Range	500,685	830,094
Menominee Range	1,105,044	1,384,465
Gogebic Range	1,264,734	1,801,480
Vermilion Range	1,182,075	1,338,110
Missabe Range	14,581,530	17,910,366
In the southern ore region—		
Tennessee Coal, Iron & R. R. Co.'s mines	1,239,563	1,981,301
Total	19,933,631	25,245,816
Coke manufactured:		
In beehive ovens	9,491,206	11,641,105
In by-product ovens	2,629,006	2,008,473
Total	12,120,212	13,649,578
Coal mined, not including that used in making coke	5,290,671	4,850,111
Limestone quarried	4,835,703	5,005,087
Blast-furnace production:		
Pig iron	10,593,726	11,645,510
Spiegel	66,435	102,260
Ferro-manganese and silicon	84,736	83,628
Total	10,744,897	11,831,398
Steel-ingot production:		
Bessemer ingots	5,055,696	5,796,223
Open-hearth ingots	7,697,674	8,383,146
Total	12,753,370	14,179,369

Products.	1911	1910
Rolled and other finished steel products for sale:	*Tons.*	*Tons.*
Steel rails (heavy and light tee and girder)	1,568,028	2,118,473
Blooms, billets, slabs, sheet, and tin-plate bars	874,474	682,364
Plates	630,512	929,020
Heavy structural shapes	547,186	656,797
Merchant steel, bars, hoops, bands, skelp, etc	1,221,606	1,527,506
Tubing and pipe	863,670	868,550
Wire rods	118,302	133,722
Wire and products of wire	1,613,754	1,490,318
Sheets (black and galvanized) and tin plate	1,079,046	1,082,787
Finished structural work	518,399	589,228
Angle splice bars and all other rail joints	160,855	235,998
Spikes, bolts, nuts, and rivets	60,386	71,326
Axles	52,046	101,066
Steel car wheels	36,652	98,105
Sundry steel and iron products	131,332	148,735
Total	9,476,248	10,733,995
Spelter	28,333	26,777
Sulphate of iron	28,381	33,684
	Barrels.	*Barrels.*
Universal Portland cement	7,737,500	7,001,500

Capital Expenditures.

The expenditures made during the year by all companies, and chargeable to capital account, for the acquisition of additional property and for additions and extensions to the plants and properties, less credits for property sold, equaled the aggregate sum of $47,815,419.75. In addition there was expended the net sum of $1,615,441.37 for stripping the overburden from ore bodies preliminary to mining from open pits, for development work at mines, and for additional logging and structural erection equipment, thus making a total expenditure on property account of $49,430,861.12. The capital expenditures are classified by property groups as follows:

For purchase of additional coking coal properties in the Connellsville, Pa., region, including mine improvements, beehive coke plants, etc. (for further description, see p. 5251)		$17,707,280.79
Gary, Ind., properties, including the Indiana Steel Plant, the city of Gary, bridge and structural plant of American Bridge Co., sheet plant of American Sheet & Tin Plate Co., and terminal railroad work adjacent to foregoing properties		7,939,813.46
Other properties, exclusive of Tennessee Coal, Iron & R. R. Co., viz:		
Manufacturing properties	$10,077,605.08	
Coal and coke properties	1,194,957.44	
Iron-ore properties	1,220,437.26	
Transportation properties	4,472,583.86	
Miscellaneous properties	132,758.01	
		17,098,341.65
Tennessee Coal, Iron & R. R. Co.'s properties, viz:		
Manufacturing plants	4,097,656.96	
Ore, coal, and limestone properties	345,655.24	
Birmingham Southern R. R.	294,019.05	
Additional plant real estate and mineral property	332,652.60	
		5,069,983.85
		47,815,419.75
Total expenditures during the year for stripping and development work at mines and for additional logging and structural erection equipment	5,138,691.60	
Less credit for expenditures of this character absorbed during 1911 in operating expenses	3,523,250.23	
		1,615,441.37
Total net expenditure in the year 1911 on property account		49,430,861.12
The total amount expended since Apr. 1, 1901 (the date of organization of United States Steel Corporation), to Jan. 1, 1912, including expenditures by Tennessee Coal, Iron & R. R. Co., from Nov. 1, 1907, only, for additional property and construction, and for net unabsorbed outlays for stripping and development work at mines, etc., equaled		410,465,265.71

Reference is made to statement on page 5248 of this report, showing the sources from which were provided the funds for payment of the foregoing total of capital expenditures made since April 1, 1901; also for the payments made since same date of capital liabilities (bonds, mortgages, and purchase obligations), together with the disposition made in the accounts of the organization of the charges and payments named.

Some of the principal additions to the properties of the subsidiary companies on account of which expenditures were made during the year 1911 are as follows:

MANUFACTURING PROPERTIES.

Total expended during the year by all manufacturing companies (including outlays account of all of the Tennessee Coal, Iron & Railroad Co.'s properties, but excluding additions at Gary, Ind.), $15,147,588.93.

Carnegie Steel Co.—Work completed during the year: Homestead Steel Works—4 additional 55-ton open-hearth furnaces at plant No. 4; plant for protective coating of steel railroad ties; extending cinder breaking yard facilities. Carrie furnaces—Enlargement of electric-power plant to supply power to cement plant No. 5. Duquesne Works—Bins and trestle for loading ore and limestone into charging boxes at open-hearth plant. Edgar Thomson Works—Installation of splice-bar department. Ohio Works—New coal-crushing plant. Bellaire Works—Installing slag-granulating plant. Cleveland Warehouse—Purchase of warehouse site and building. Additional land purchased—3 lots adjoining Edgar Thomson Works and 3 lots adjoining Duquesne Works; 1¾ acres at Ohio Works.

Work in progress: Homestead Steel Works—Bins for storage of ore, limestone, and dolomite at open-hearth plant No. 4; additional facilities for general pumping station. Howard Axle Works—Axle heat-treating plant. Carrie Furnaces—15 additional cinder ladle cars. Duquesne Works—Pipe line to convey treated water to boiler houses of blast furnaces Nos. 1 to 4; 10 additional cinder ladle cars. Edgar Thomson Works—13 additional cinder ladle cars. Schoen Wheel Works—Additional generator set and power-transmission line from Davis Island. Ohio Works—Additional real estate at McDonald, Ohio, for site of bar-finishing mill, including right of way and construction of railroad from main works. Cleveland Warehouse—Additional warehouse and equipment for handling and cutting stock.

Illinois Steel Co.—Work completed during the year: South Works—New light structural mill; 2 low-pressure steam turbines for power plant; 2 additional boilers, open-hearth plant No 2. Joliet Works—Gas cleaning plant at Nos. 3 and 4 blast furnaces and connecting gas main from Nos. 1 and 2 furnaces; aqueduct from sanitary canal to plant; new pumping plant at water intake.

Work in progress: South Works—Dock retaining wall to inclose submerged lands. Joliet Works—New electric power plant and motors, replacing steam power; new loam storage building at by-product coke plant.

Illinois Steel Warehouse Co.—The new warehouse and equipment at St. Louis was completed during the year.

Universal Portland Cement Co.—The new cement plant (No. 6) at Buffington, Ind., annual capacity 4,000,000 barrels, was completed and placed in operation.

Lorain Steel Co.—Work completed during the year: Johnstown Works—4 electric track-welding cars complete with equipment; additional machinery in switch works to increase capacity of welding room.

Work in progress: Johnstown Works—Extension to pattern shop building; additional equipment for switch and pattern shops and steel foundry.

National Tube Co.—Work completed during the year: National Works—New electric power station, including building, one 3,000-kilowatt low-pressure steam turbogenerator; three 1,000 kilowatt motor generator sets and necessary auxiliary machinery and equipment; additional hot-blast stove, furnace No. 3; oil and paint storage house.

Work in progress: Kewanee Works—Equipment for the manufacture of gate valves.

The National Tube Co. (*Lorain, Ohio*).—Work completed during the year: Extension to building and additional 6-hole pit furnace at No. 1 blooming mill; 144-foot extension to boiler shop building; enlargement of main building of the Bessemer dry bottom house.

Shelby Steel Tube Co.—Work completed during the year: Standard Works—Increasing the reeling and rolling facilities at mills Nos. 1 and 3.

American Steel & Wire Co.—Work completed during the year: Central Furnaces—New blast furnace "D." American Works—New storage warehouse. Salem Works—48 American felt-roofing nail machines and building for same. Cuyahoga Works—Additions to hot flat mill equipment. Anthony Works—Enlarging warehouse building. Waukegan Works—Additional spring mill machinery and extension of building. Rockdale Works—Enlarging wire mill building; 67 additional wire-drawing blocks;

electric power plant and motor equipment. Allentown Works—Extension to wire mill building. Worcester, North Works—30 additional wire-drawing blocks. Worcester, Cable Works—New storage building for bare copper and insulated wires. Worcester, Rope Works—Additional rope machinery. New Haven Works—Additional rope machinery. Richmond, Ind.—New distributing warehouse. There were constructed for installation at various works 4 automatic concrete fabric machines, 10 Anthony fence machines, and 13 National fence machines. The plant and patents of the American Post Co. were acquired. There were purchased 10 acres of land adjoining the Rockdale works.

Work in progress: Newburgh Wire Works—Extending shafting and screw stock warehouse building; two 5-ton overhead traveling cranes. Trenton Works—Enlarging electric-power plant; two additional gas producers. River division—10 additional steel barges (9 delivered in 1911). Worcester, North Works—2 drawing frames for odd-shaped wire. Worcester, Cable Works—New building and equipment for manufacture of varnished cambric insulation. New Haven Works—Addition to patenting building. Pacific Works—2 woven-fence machines.

The construction of the new rod and wire mill at Birmingham, Ala., was continued, expenditures to the amount of $1,122,802.22 having been made thereon during the year.

Edgar Zinc Co.—Work in progress: Cherryvale Works—New automatic roasting kiln.

American Sheet & Tin Plate Co.—Work completed during the year: Vandergrift Works—Brick office building; extending No. 2 warehouse building and crane runway. New Castle Works—Enlarging No. 1 tin house; 2 additional tinning machines. Shenango Works—2 new annealing furnaces. National Works—Extension to white annealing building; new 10-ton overhead traveling crane. Laughlin Works—Additional tinning equipment. New Philadelphia Works—192-foot addition to main annealing building; new warehouse building; new annealing furnace; 2 squaring shears. Crescent Works—New boiler and enlarging boiler house. American Works—New 4-door annealing furnace. For the benefit of the men working at the hot mills in the various works air-cooling systems were installed.

Work in progress: Vandergrift Works—Enlarging the annealing building; 6 double annealing furnaces; 6 gas producers; 2 additional turbogenerators. Old Meadow Works—Additions to boiler plant. Crescent Works—New annealing furnace; 2 gas producers. Scottdale Works—Equipping 6 galvanizing pots with washing and drying machines.

American Bridge Co.—Work completed during the year: Shiffler Works—Plant to manufacture galvanized towers for power transmission lines.

Work in progress: Ambridge Works—Extending launching ways, handling facilities and equipping plate shop for steel barge construction.

Union Steel Co.—Work completed during the year: South Sharon Works—Extending wire mill building; 30 additional wire-drawing blocks; electric-power line; additional galvanizing equipment.

Minnesota Steel Co. (*Duluth plant*).—Substantial progress was made in the construction of the several units of this plant, the expenditures for the year totaling the sum of $1,323,569.77.

Tennessee Coal, Iron & Railroad Co. (*manufacturing plants*).—Work completed during the year: Ensley Works—New hospital building; equipping rail mill to roll 4-inch billets. Bessemer Rolling Mills—Bar-twisting department for concrete reenforcement bars. Central Electric Power Plant—Turbogenerator equipment, 12,000-kilowatt, to provide electric power for Ensley plant, new by-product coke plant, coal washer, and for the new wire plant of the American Steel & Wire Co. Central Water Works—Reservoir, pumping plant and distributing mains for water supply for steel works, furnaces, and coke ovens; distributing main from reservoir to new wire plant of American Steel & Wire Co. There were acquired during the year 3,689 acres mineral, 520 acres surface, and 917 acres mineral and surface lands. At Corey, Ala., there were purchased 106 lots as sites for employees' houses, the construction of which is in progress.

Work in progress: Ensley Works—2 additional hot-blast stoves, furnaces Nos. 1 and 2; mould drying shed in open-hearth plant; additional soaking pit crane. By-Product Coke Plant—New plant of 280 coke evens, "Koppers" type; 24-inch gas main to Ensley Steel Works.

Ore, coal, and limestone properties—Work completed during the year: Fossil mines—Railroad track between Nos. 6½ and 7 slopes.

Work in progress: Fossil mines—Opening No. 6½ slope. Ishkooda mines—Opening No. 13½ slope. Pratt mines—Opening and equipping No. 13 mine; opening No. 16 mine. Whitwell mines—20 new dwellings.

Birmingham Southern Railroad Co.—Additional equipment—1 locomotive, 25 steel gondola cars, 50 steel flat cars, 25 steel underframe box cars, and 15 steam-shovel dump cars. A new freight station was completed at Ensley. The new extensions from

Ensley to Bessemer, and from the main line to the plant of the American Steel & Wire Co., were completed, as were also the yards and terminals at Ensley, Bessemer, and West Bessemer.

United States Steel Products Co.—Purchase of property of the Risdon Iron & Locomotive Works at San Francisco, Cal., for warehousing purposes. Work was in progress at close of year in dredging the main water front and reconstructing the wharves and bulkhead; also constructing tracks on docks, in yards and buildings and increasing the facilities for handling stocks in warehouse buildings.

COAL AND COKE PROPERTIES.

Total expended during the year by all coal and coke companies, exclusive of the Pittsburgh-Monongahela coal purchase, $1,194,957.44.

There were acquired by purchase 93.219 acres of coking coal in the Pittsburgh district.

At Ronco Works a new coke-screening plant was completed.

New steel tipples and hoists and pit mouths at Nos. 4 and 5 works, in the Pocahontas, W. Va., field were completed, on which there were expended during the year $88,790.09.

The expenditures in the Illinois and Indiana steam-coal fields for acquirement of additional coal acreage and for construction work amounted to $1,037,969.62. At Universal mines the new double coal-mining plant, to serve two mines, begun in 1910, is nearing completion; a railroad connection to serve the new mines has been built. At Vermilion mines the ventilating systems have been improved, additional escape ways provided, and the haulage system extended. Mine equipment purchased included 36 electric coal-mining machines, 65 steel and 50 wooden mine cars.

IRON-ORE PROPERTIES.

Total expended during the year by all iron-ore-mining companies, $1,220,437.26.

The foregoing aggregate expenditure by the iron-ore-mining companies covers, in addition to the construction mentioned below, outlays made in exploring and opening up mines on new ore properties.

Norrie-Aurora mine: New electric power and lighting plant; cage hoist, shaft F, Aurora.

Davis mine: Air line to Geneva and Puritan mines.

Iroquois mine: Underground pumping plant.

Virginia district: Nine dwellings.

Sauntry-Alpena mine: Pumping plant; electric light and power plant, shaft No. 2.

Leonidas mine: Nineteen dwellings boarding house; change house; office; and warehouse; hoisting plant; steel ore and rock trestles, account water-supply system for domestic use and fire protection.

Mississippi mine: Six dwellings; electric tramming plant.

Harold mine: Fourteen dwellings; electric tramming plant.

South Uno mine: Tracks for open pit.

Dale mine: Tracks for open pit.

Canisteo mine: Thirteen dwellings; additional machinery for district repair shop.

Hill mine: Twenty-nine dwelings, two boarding houses; emergency hospital building; three mine pumps.

Holman mine: Underground pumping plant.

TRANSPORTATION PROPERTIES.

Total expended during the year by all transportation companies, $4,472,583.86.

The expenditures as above include the cost of the following additional equipment acquired by the several railway companies, viz, 40 locomotives, 10 steel ore cars, balance cost of 1,000 steel gondola cars (400 cars delivered in 1911), balance cost of 500 steel side-dump cars (375 cars delivered in 1911,) 3 tank cars, 2 flat cars, 43 caboose cars, 11 boarding cars, 2 slab cars, 1 cinder car, 2 snowplows. For the above equipment there were expended $1,494,473.02.

Expenditures during the year amounting to $592,554.25 were made by the Pittsburgh Steamship Co., covering the cost of two additional 12,000-ton steamships placed in service in 1911 as additional units to the fleet. In addition to the two foregoing steamers, one 12,000-ton steamship was purchased and put into commission in 1911, the cost being charged replacement account, as such steamer was acquired in lieu of steamers retired from service.

For use in the export trade there was purchased and put into commission an additional ocean-going freight steamship.

Various payments were made by the following companies for important construction work, to wit:

By Union Railroad Co.—At Duquesne, for right of way and additional land for storage tracks, and at Green Springs, for enlarging yard, $52,211.73.

By Donora Southern Railroad Co.—General reconstruction of yard tracks and betterments at Donora, $47,703.44.

By Elgin, Joliet & Eastern Railway Co.—Completing new roundhouses at Waukegan and East Joliet, $46,578.68; account joint yard with Pennsylvania lines at Hartsdale and new storage yard at Rossville Junction, $59,351.44; account subway under tracks and street improvements at Joliet, $59,756.29; completing viaduct over tracks at East Joliet, account bascule bridge at Shearson and for bridges, culverts, and drainage at various points, $61,779.70.

By Chicago, Lake Shore & Eastern Railway Co. (exclusive of terminal work at Gary).—Tracks for new structural mill at South Chicago and for the new cement plant, No. 6, at Buffington, Ind., $75,720.27; account new tracks at limestone quary, Fairmount, $19,181.07.

By Duluth & Iron Range Railroad Co.—Reconstructing with steel superstructure the old ore dock No. 1 at Two Harbors, and raising track approaches thereto, making this a thoroughly equipped modern ore dock of 210 pockets, $597,795.89; sundry mine and yard tracks, spurs, and sidings, $102,437.12.

By Duluth, Missabe & Northern Railway Co.—New steel car repair and auxiliary shops at Proctor, $55,192.90; passenger and freight station at Hibbing and water and coaling stations at Hull-Rust yard, $51,211.61. The Hull-Rust Short Line, partly constructed in 1910, was completed, $195,370.16 having been expended in 1911. Other expenditures were for new track system at Hibbing, including 281 miles main track, less credit for track abandoned, $70,763.08; second track on Alborn Branch, from Hull-Rust Junction to Coleraine, 23.62 miles, $133,102.79.

By Interstate Transfer Railway Co. and Spirit Lake Transfer Railway Co.—For additional right of way and terminal grounds, for completion of bridge over the St. Louis River and approaches, and for track connection and tracks within the Minnesota Steel Plant, $113,948.66.

By Pittsburgh & Conneaut Dock Co.—Expenditures of $62,018.44 were made to complete the new electric ore-unloading machine for dock No. 4 at Conneaut Harbor and to construct a machine shop and storeroom at Ashtabula Harbor.

MISCELLANEOUS PROPERTIES.

Total expended during the year, $132,758.01.

For the construction of natural-gas pipe lines in West Virginia, 17½ miles of new 10-inch pipe, $110,588.46; for electric-light wiring the village of Proctor and extension of water mains, $16,214.39.

Volume of Business.

The volume of business done by all companies during the year, as represented by their combined gross sales and earnings, equaled the sum of $615,148,839.79, as compared with a total of $703,961,424.41 in the preceding year.

This amount represents the aggregate gross value of the commercial transactions conducted by the several subsidiary companies and includes sales made between the subsidiary companies and the gross receipts of the transportation companies for services rendered both to subsidiary companies and to the public.

The earnings for the year resulting from the above gross business represent the combined profits accruing to the several corporate interests on the respective sales and services rendered, each of which is in itself a complete commercial transaction.

Employees and Pay Rolls.

The average number of employees in the service of all companies during the fiscal year of 1911, in comparison with the fiscal year of 1910, was as follows:

	1911	1910
Employees of—	*Number.*	*Number.*
Manufacturing properties	140,118	154,563
Coal and coke properties	21,723	23,528
Iron-ore properties	14,445	16,956
Transportation properties	17,963	20,758
Miscellaneous properties	2,639	2,630
Total	196,888	218,435
Total annual salaries and wages	$161,419,031	$174,955,139

EMPLOYEES' STOCK SUBSCRIPTIONS.

In continuance of the plan observed in previous years, beginning with 1903, the employees of the United States Steel Corporation and the subsidiary companies were, in January, 1912, offered the privilege of subscribing for preferred or common stock.

The subscription price was fixed at $110 per share for the preferred and $65 per share for the common stock. The allowances for special compensation or bonus to be paid subscribers who retain their stock were fixed at $5 per share per year for the preferred and $3.50 per share annually for the common stock. The conditions attached to the offer and subscription, aside from the features of subscription price and the amount of special compensation or bonus to be paid, were substantially the same as those under which stock has been offered to employees in each of the previous nine years.

Subscriptions were received from 36,946 employees for an aggregate of 30,619 shares of preferred and 30,735 shares of common stock.

SUMMARY OF EXPENDITURES FOR ADDITIONAL PROPERTY AND CONSTRUCTION AND FOR PAYMENT OF CAPITAL OBLIGATIONS.

From April 1, 1901, to December 31, 1911.

The following is a summary of the payments which have been made by all companies since April 1, 1901 (the date of organization of United States Steel Corporation), for the above-named purposes, viz:

For additional property and construction, including unabsorbed net expenditures for stripping and development work, etc., at mines		$410,465,265.71
For bonds and mortgages discharged, exclusive of bonds redeemed with sinking-fund moneys	$21,593,657.78	
For bonds redeemed with bond-sinking funds	62,274,284.15	
For purchase-money obligations paid off, originally issued for acquirement of property	38,078,998.88	
	121,946,940.81	
Less amount of securities included in this total of payments which were originally issued after April 1, 1901, in financing property and construction expenditures made subsequent to that date	6,610,582.02	
		115,336,358.79
Total payments on capital accounts		525,801,624.50
Of the foregoing total expenditures and payments there have been financed by the issue and sale of securities the following amounts, viz:		
By United States Steel Corporation 10–60 year 5 per cent bonds	$20,000,000.00	
By Union Steel Co. mortgage and collateral trust bonds issued and sold for account of construction expenditures on that company's properties made since Dec. 1, 1902	9,168,727.79	
By H. C. Frick Coke Co., Pittsburgh-Monongahela purchase-money bonds issued in payment of cost of coal and coke properties acquired in 1911	17,712,000.00	
By bonds and mortgages of various other subsidiary companies	47,253,138.41	
By purchase-money obligations issued	5,403,528.20	
	99,537,394.40	
Less amount of the foregoing securities which have been retired up to Dec. 31, 1911	6,610,582.02	
		92,926,812.38
Balance of expenditures and payments		432,874,812.12
This balance of capital expenditures has been paid with funds derived from the following sources, to wit:		
Bonds paid from bond-sinking funds set aside from income		62,274,284.15

Expenditures paid from bond-sinking, depreciation, and replacement funds, and from surplus net income, and formally written off thereto by authority of the board of directors, the property-investment account being correspondingly reduced, viz:

Expended for—

	Paid from sinking, depreciation, and replacement funds.	Paid from surplus net income.	
Additional property and construction	$27,628,712.58	$147,847,237.12	
Payment of capital obligations	14,076,204.79	15,847,186.43	
	41,704,917.37	163,694,423.55	$205,399,340.92

Total of payments made from funds and surplus net income and charged off thereto	267,673,625.07
And the funds for the payment of the balance of the outlays made for capital expenditures since Apr. 1, 1901, have been advanced from the following sources, to wit:	
From surplus appropriated (since Jan. 1, 1908) to cover payment of capital expenditures made	40,000,000.00
From unapplied balances at Dec. 31, 1911, to credit of accrued bond, sinking, depreciation, and replacement funds, and from undivided surplus at same date of United States Steel Corporation and subsidiary companies	125,201,187.05
Total	432,874,812.12

BALANCE SHEET, STATEMENTS OF ACCOUNTS AND STATISTICS.

The statements of accounts, statistics, etc., presented in this report comprehend, unless otherwise specifically stated, the combined results for the United States Steel Corporation and all of the subsidiary companies, including the Tennessee Coal, Iron & Railroad Co.

The consolidated general balance sheet, page 5255, exhibits the combined assets and liabilities of the United States Steel Corporation and of the several subsidiary companies, based on the valuations at which the stocks of the subsidiary companies and the Carnegie Co. bonds were acquired by the Steel Corporation, but liabilities from one company to another are omitted from both liabilities and assets.

The accounts of the Steel Corporation and of the subsidiary companies for the year 1911 have been audited by Price, Waterhouse & Co., the chartered accountants selected for this purpose by the stockholders at the annual meeting, April 17, 1911. The certificate of the chartered accountants is printed in full on page 5244.

GENERAL.

The production by the subsidiary companies during the year 1911 of basic semi-finished materials, and of rolled and other finished products for sale to customers outside of the organization, in comparison with similar results in the preceding year, was as follows:

	1911	1910	Increase (+) or decrease (—).	
				Per cent.
Pig iron, spiegel, and ferro ... tons	10,744,897	11,831.398	—1,086,501	— 9.2
Bessemer and open-hearth steel ingots ... do	12,753,370	14,179,369	—1,425,999	—10.1
Finished products for sale, except cement ... do	9,476,248	10,733,995	—1,257,747	—11.7
Cement ... barrels	7,737,500	7,001,500	+ 736,000	+10.5

The output of finished products for sale was only about 67 per cent of the full normal productive capacity of the plants. The decrease in output was most marked in those classes of materials used largely by railways, viz, rails, track fittings, and steel car-building material. The decrease in business done as represented by total tonnage output of finished steel products was 11.7 per cent in comparison with 1910. In the domestic trade the decrease was, however, considerably greater, namely, 18.6 per cent, while in the export business there was an increase of 41.4 per cent. The following is a statement of shipments made in 1911 to customers outside of the organization in comparison with 1910 shipments:

	1911	1910	Increase (+) or decrease (−).	
				Per cent.
Domestic.				
Rolled steel and other finished products..........tons..	7,740,897	9,511,694	1,770,797	− 18.6
Pig iron, spiegel, ferro, and scrap ....do....	399,935	388,872	11,063	+ 2.8
Iron ore, coal, and coke.........................do....	1,587,322	1,360,090	227,232	− 16.7
Sundry materials and by-products...............do....	63,206	77,223	14,017	− 1.8
Total, all kinds of materials, except cement.do....	9,791,360	11,337,879	1,546,519	− 13.6
Cement.......................................barrels..	7,580,758	6,679,415	901,343	+ 13.5
Export.				
Rolled steel and other finished products..........tons..	1,719,272	1,216,057	503,215	+ 41.4
Pig iron and scrap...............................do....	26,728	6,974	19,754	+283.3
Sundry materials and by-products...............do....	492	465	27	+ 5.8
Total, all kinds of materials, except cement..do....	1,746,492	1,223,496	522,996	+ 42.7
Cement.......................................barrels..	110,364	....	110,364	....
Aggregate tonnage of rolled steel and other finished products shipped to both domestic and export trade.......................................tons..	9,460,169	10,727,751	1,267,582	− 11.8

The material slackening in the domestic demand for the products of the subsidiary companies which became apparent in the fall of 1910 continued in a marked degree until the early part of 1911, and to a greater or less extent until the closing weeks of that year. In November, 1911, a substantial buying movement developed, the subsidiary companies' unfilled orders on hand rising to a total of 5,084,761 tons at December 31, 1911. This improvement in business has maintained fairly well since the first of the year and to the date of writing this report. At February 29, 1912, the unfilled-order tonnage equaled 5,454,200 tons. In May, 1911, a sharp break occurred in selling prices of nearly all steel products, and prices continued to gradually decline, reaching in the latter part of the year the lowest figures, in respect of most of the commodities, which have been realized since 1898.

The expenditures made during the year for repairs, maintenance, and general upkeep of the properties, in comparison with similar outlays in 1910, were as follows:

	1911	1910	Decrease.	Per cent.
Ordinary repairs and maintenance........................	$37,882,851	$40,818,899	$2,936,048	7.2
Extraordinary replacements and general rehabilitation...	7,077,414	8,489,286	1,411,872	16.6
Total..	44,960,265	49,308,185	4,347,920	8.8

The properties of the several companies have been maintained in excellent physical condition. The aggregate sum of charges to and allowances from gross earnings for the year to cover deterioration arising from wear and tear of improvements, exhaustion of minerals, and for obsolescence amounted to $64,134,706. Included in this total are the above expenditures of $44,960,265 for ordinary repairs and extraordinary replacements.

The amount of bonds, mortgages, and purchase-money obligations of the corporation and subsidiary companies paid off during the year was $11,021,359.46. Of this total, $7,751,000 represents bonds retired under the sinking-fund provisions of the mortgages securing the same. During the year bonds of subsidiary companies to the amount of $14,854,000 were issued and sold for account of outlays for construction expenditures and in the refunding of maturing bonds. There were also issued $17,712,000 of subsidiary company bonds in payment for the Pittsburgh-Monongahela coal property purchased, and there were assumed $600,000 of outstanding bonds on warehouse property purchased in San Francisco.

There was expended during the year by the corporation and the subsidiary companies for additional property, extensions and construction, and for stripping and development work at mines the net sum of $49,430,861.12, viz:

For purchase of additional coking-coal properties in the Connellsville (Pa.) region, more fully described below	$17, 707, 280. 79
For the Gary (Ind.) extensions	7, 939, 813. 46
For Tennessee Coal, Iron & R. R. Co. extensions	5, 069, 983. 85
For all other properties, extensions, and betterments, including net additional expenditures for mine stripping and development	18, 713, 783. 02
	49, 430, 861. 12

The more important items of additions and construction for which the foregoing outlays were made are set forth in the several statements and tables printed in this report.

At the close of the year the amount of unexpended appropriations for construction and extraordinary replacements, including the 1912 program for stripping and development work at iron-ore mines, was approximately $20,000,000, but it is probable that not all of this amount will be expended during 1912. These authorizations cover a wide range of miscellaneous additions and improvements at various points, but none of them, aside from that for the new steel plant at Duluth, is of magnitude. The before-mentioned total includes about $5,500,000 for additional work at Gary in finishing the improvements heretofore determined upon.

In order to insure to the subsidiary companies operating blast furnaces in the Pittsburgh, Valley, and Cleveland districts a supply of coke for a period of years more nearly equal to that which the large investment in furnaces and dependent mills requires, there were acquired from the Pittsburgh Coal Co. and the Monongahela River Consolidated Coal & Coke Co. on July 1, 1911, by the H. C. Frick Coke Co., a subsidiary of the corporation, the following coking-coal properties, viz: 15,943 acres of unmined coal and 1,408 acres of surface situated in Fayette, Greene, and Washington Counties, Pa. On this property there are 3 developed and operating coal mines, 3 coking-coal plants comprising 986 beehive ovens, necessary tenements, equipments, tools, etc., for complete operation of the mines and ovens. A large part of the coal acreage acquired is located in the third, fourth, and fifth pools of the Monongahela River, thus permitting the output to be conveniently shipped by river. A portion of the acquired property also lies immediately in front of the extensive Mingo tract of coal (owned by Carnegie Steel Co.) in Washington County, thus providing a practical means for a large part of the Mingo property to be worked to the river. The entire acreage as above mentioned has been conveyed, but the titles to some small parcels have not yet been perfected and full and complete mining rights secured for other parcels. Therefore the gross consideration payable the vendors has not yet been exactly determined. It will, however, be about $17,712,000. The property has been paid for by the issue to the vendors of H. C. Frick Coke Co., Pittsburgh-Monongahela first lien 5 per cent purchase-money gold bonds, dated July 1, 1911, payable $600,000 annually each July beginning in 1915, and secured on the property acquired. The issue is limited to $18,000,000. To the close of the year $16,500,000 in bonds had been delivered and the balance retained pending examination and acceptance of all titles.

At the close of the year nearly all of the manufacturing plant construction heretofore authorized for the Gary (Ind.) district had been completed. At the steel plant of the Indiana Steel Co. the sheet-bar mill was completed and put in operation on June 29, 1911; the two 12-inch and the 10-inch merchant bar mills about September 1, 1911; the 60-inch plate mill on November 4, 1911. The first battery of the by-product coke plant, consisting of 70 ovens, went into operation on April 12, 1911, and 4 additional batteries at various later dates in 1911. The full capacity of this plant, comprising 8 batteries of 70 ovens each, will be completed by April 1, 1912. The third unit of open-hearth furnaces, consisting of 14 furnaces of 65 tons capacity each, was placed in operation in February, 1912. An addition to the electric-power station, consisting of 6 generators of 3,000 kilowatts each, driven by gas engines, was completed during the year.

The several units of the sheet plant of the American Sheet & Tin Plate Co., and of the bridge and structural plant of the American Bridge Co., both at Gary, were completed and commenced operations at various dates during the year.

The output of the Gary steel plant of the Indiana Steel Co. during 1911 was as follows: 707,273 tons of pig iron, 1,036,545 tons of open-hearth steel ingots, 281,980 tons of open-hearth steel rails, and 469,360 tons of various other rolled-steel products. The by-product coke plant produced 811,804 tons of coke. The production of the sheet plant was 24,556 tons of black and galvanized sheets, and at the bridge plant there were produced 27,371 tons of fabricated steelwork.

During the year the Gary Land Co. constructed in the city of Gary 261 dwellings and apartment houses. Considerable work was also done in paving streets, laying sidewalks, sewers, gas and water pipe, and electric wire lines to serve the increasing population of the city.

The total amount expended to December 31, 1911, at Gary by the several subsidiary companies for acquirement of real estate, development, and construction was as follows:

For real estate (exclusive of that occupied by the manufacturing plants) and for development and construction work in the city of Gary, less credits for lands, lots, and houses sold	$9,966,520.16
For construction of the manufacturing plants, together with cost of land occupied by same	62,719,664.75
For terminal railroad work	5,572,323.70
Total	78,258,508.61

The funds for the payment of the foregoing have been provided from the following sources, viz:

From surplus specially appropriated	$65,000,000.00
From depreciation allowances raised by subsidiary companies on other of their properties and invested in the Gary property	1,510,000.00
By Chicago, Lake Shore & Eastern Ry. Co. through issue and sale of its bonds	5,258,405.32
And the balance has been provided by subsidiary companies interested from their surplus and working capital	6,490,103.29
	78,258,508.61

In addition to the outlays made as above for capital expenditures at Gary, the companies have also invested a considerable amount in inventories and working capital required for the operation of the plants.

There was purchased in May, 1911, for warehouse purposes the property of the Risdon Iron & Locomotive Works, in San Francisco, Cal. The plant had previously been operated in the ship and engine building and repairing business, and had for a long time been offered for sale. The property consists of about 20 acres of land, with considerable water front, is well located, and has on it several buildings especially adapted for the storage and warehousing of steel products. It is believed that by carrying on the Pacific coast large and varied stocks of the products of the subsidiary companies their distribution will be materially expanded.

Substantial progress was made during the year on the construction of the new steel plant at Duluth, Minn. The expenditures for the plant and the terminal railroads serving the same amounted for the year to $1,437,518.

An additional outlay of $1,037,969 was made in payment for coal property in Illinois and Indiana, the purchase of which had been contracted for in previous year, and for the development of the properties.

There were purchased by the subsidiary transportation companies during the year additional railroad equipment as follows: 41 locomotives, 893 freight cars, and 71 road and service cars. There were also purchased and placed in commission three 12,000-ton steamships for service in the ore-carrying trade on the Great Lakes; and there was acquired one aditional ocean-going freight steamer for service in the export trade.

All of the other important construction work for new extensions and additions to which reference was made in last year's report has either been completed and placed in operation or was nearing completion at the close of the year.

The average number of employees in the service of the corporation and the subsidiary companies during the entire year 1911 was 196,888, as compared with 218,435 in 1910, a decrease of 21,547, or 9.86 per cent. The aggregate amount of the pay rolls for the year 1911 for all employees was $161,419,031, as against $174,955,139 in the previous year. The average daily salary and wage earnings per employe for the year 1911 shows an increase of 4.23 per cent over 1910. This increase is due principally to the advances made on May 1, 1910, in the wage rates paid to a large proportion of the employees of the subsidiary companies.

There was set aside from the accumulated undivided surplus the sum of $663,018.37 for permanent pension fund, reference to which was made in last year's annual report. Of the foregoing amount $163,018.37 was paid over in cash to the board of trustees of the United States Steel and Carnegie pension fund for use by the board as cash working fund. A like amount for similar purposes was also contributed by the Carnegie relief fund. The balance of the appropriation first mentioned, together with the $1,000,000 set aside in previous years for pension purposes, is carried to credit of pension fund in general balance sheet. During the year the corporation also paid over to the board of trustees $156,301.70 which was charged to current operations. This amount, together with the $200,000 of income received by the trustees from Carnegie relief fund (being the income on the $4,000,000 fund created by Mr. Carnegie), and making a total of $356,301.70, was disbursed by the trustees during the year for pension and relief purposes. At the close of the year there were 1,606 ex-employees on the pension rolls.

A change has been made in the manner of stating in the consolidated general balance sheet the amount of profits earned by subsidiary companies on intercompany products on hand in inventories on December 31, 1911. These profits, instead of being carried separately in the balance sheet as subsidiary companies' surplus locked up in inventories, have been stated in a deduction from the amount of valuation at which inventories are included in current assets. A further and detailed explanation of this change is included in the inventory statement, page 16. While this change reduces the amount specifically shown in the balance sheet as surplus, such reduction does not mean a corresponding loss of value in assets, but merely transfers the profits in question to another location in the balance sheet, namely, as a deduction from gross values to the subsidiary companies of inventories on hand. Neither does the change affect in any way the currently reported earnings as heretofore compiled nor as they will hereafter be made up.

In the annual report for 1906 reference was made to the arrangement which had been consummated for a lease of the so-called Great Northern Railway ore properties by the Great Western Mining Co.. a subsidiary company of this corporation. In accordance with an option reserved to the lessee to cancel the lease on January 1, 1915, the Great Western Mining Co., on October 26, 1911, formally notified the lessors that the company elected to cancel the lease. To December 31, 1911, there had been mined and shipped under this lease 7,832,137 gross tons of ore; and royalties had been prepaid on account of minimum tonnages for years prior to 1911, covering an additional 2,892,183 tons. It is expected this prepaid tonnage, as well as the minimums called for by the lease for years 1912, 1913, and 1914, namely, 15,750,000 tons, will be mined and shipped prior to 1915, thus making an aggregate of 26,474,320 tons of ore which it is expected will be shipped under the lease prior to its relinquishment on January 1, 1915. This total tonnage is equal to about one year's ore requirements of the blast furnaces of the subsidiary companies (exclusive of those of Tennessee Coal, Iron & Railroad Co.), on the basis of the furnaces operating normally full throughout the year.

On October 26, 1911, the United States Government filed a petition in the Circuit Court of the United States for the District of New Jersey against the corporation and a number of its subsidiary companies, alleging that the corporation and its codefendants are in violation of the act of Congress of July 2, 1890, and asking that they be adjudged to be illegal, and that they be dissolved. On October 27, 1911, an official statement with reference to this proceeding was issued on behalf of the corporation by its chairman. This statement is given below for the information of all stockholders:

"I think it would be improper for me at this time to make any comments concerning the suit which has been brought against the United States Steel Corporation, except to say I regret exceedingly that the Department of Justice felt called upon to institute proceedings. If any harm results it will fall upon the stockholders and employees, aggregating a very large number, and any loss to them must be deplored. It is a time for everyone to keep cool, with a disposition to patiently await results, knowing that in the end justice will be done to all interests.

"I believe a disclosure of all the facts applicable to the allegations contained in the Government's bill of complaint as a ground for relief will show that the suit ought to be decided in favor of the corporation on the merits, and that the following facts will be established:

"1. That in the organization of the United States Steel Corporation those in charge had no intention of forming a monopoly or of restraining trade.

"2. That the corporation never has had, or attempted to exercise, a monopoly or to restrain trade.

"3. That the conduct of the affairs of the corporation has clearly and positively negatived any effort or intention to violate any provision of the Sherman law.

"4. That the existence of the corporation has been of benefit and not of injury to its employees, its customers, its competitors, and the general public.

"5. That no misrepresentation was made to the President relative to the Tennessee Coal & Iron properties, and that the motive of those connected with the purchase was to prevent a threatened general financial disaster which would have adversely affected the corporation as well as others."

The answer of the corporation and codefendants was filed with the court on February 1, 1912, and a summary of it is being sent to each stockholder with this annual report.

The board takes pleasure in acknowledging the loyal and efficient services of the officers and employees of the corporation and the several subsidiary companies.

By order of the board of directors:

ELBERT H. GARY, *Chairman.*

CERTIFICATE OF CHARTERED ACCOUNTANTS.

NEW YORK, *March 4, 1912.*

To the stockholders of the United States Steel Corporation:

We have examined the books of the United States Steel Corporation and subsidiary companies for the year ending December 31, 1911, and certify that the balance sheet at that date and the relative income account are correctly prepared therefrom.

During the year only actual additions and extensions have been charged to property account. Having regard to the curtailment of operations during the year and to amounts set aside in previous years, the provision made for depreciation and extinguishment is, in our opinion, fair and reasonable. The item of deferred charges to operations represents expenditures reasonably and properly carried forward to operations in subsequent years.

The valuation of the stocks on hand, as shown by inventories certified by the responsible officials, have been carefully and accurately made at approximate cost. Full provision has been made for bad and doubtful accounts receivable and for all ascertainable liabilities.

We have verified the cash and securities by actual inspection or by certificates from the depositaries, and are of opinion that the marketable bonds and stocks included in current assets are worth the value at which they are stated in the balance sheet.

We certify that in our opinion the balance sheet is properly drawn up, so as to show the true financial position of the corporation and subsidiary companies on December 31, 1911, and that the relative income account is a fair and correct statement of the net earnings for the fiscal year ending at that date.

PRICE, WATERHOUSE & CO.

Property investment account Dec. 31. 1911.

Balance of this account as of Dec. 31, 1910, per annual report			$1,524,780,669.02
Adjustments during 1911 in the foregoing balance ... *Cr.*			*453,232.78*
Expended during 1911 for additional property and construction			47,815,419.75
			1,572,142,855.99
Less charged off to the following accounts, viz:			
To bond sinking funds		$413,000.00	
To depreciation and replacement funds		5,172,564.00	
			5,585,564.00
			1,566,557,291.99
Expenditures for stripping and development at mines and investment in structural erection and logging plants, viz:			
Balance on Dec. 31, 1910		23,103,712.21	
Expended during the year 1911	$5,138,691.60		
Less charged off to operating expenses	3,523,250.23		
		1,615,441.37	
			24,719,153.58
Balance of property investment account Dec. 31, 1911, per consolidated general balance sheet			1,591,276,445.57

Appropriated surplus to cover capital expenditures Dec. 31, 1911.

All appropriations made from surplus net income prior to January 1, 1908, applied in payment of capital expenditures and aggregating the total sum of $163,694,423,55, have been formally written off to the credit of property investment account in consolidated general balance sheet. The appropriations made since January 1, 1908, from surplus net income for above-mentioned purpose and totaling $40,000,000 are carried in "appropriated surplus" account, which is represented on December 31, 1911, by the following:

Capital expenditures made by subsidiary companies other than for account of the Gary (Ind.) properties	$25,000,000
Capital expenditures made for the Gary properties	15,000,000
Total assets carried in property investment account representing appropriated surplus account	40,000,000

Consolidated general balance sheet, Dec. 31, 1911.

ASSETS.

Property account (properties owned and operated by the several companies):			
Balance of this account as of Dec. 31, 1911, per details on page 5254			$1,591,276,445.57
Less balances at Dec. 31, 1911, to credit of—			
Accrued bond sinking, depreciation, and replacement funds, per table on page 5236		$71,734,410.03	
Bond sinking funds with accretions, being income appropriated for general depreciation and invested in redeemed bonds not treated as assets (but interest on which is currently added to the sinking funds) and in cash as below		59,238,052.70	
			130,972,462.73
			1,460,303,982.84
Deferred charges to operations:			
Payments for advanced mining royalties, exploration expenses, and miscellaneous charges, chargeable to future operations of the properties		16,208,581.99	
Less fund reserved from surplus to cover possible failure to realize advanced mining royalties		7,000,000.00	
			9,208,581.99
Investments: Outside real estate and investments in sundry securities, including real-estate mortgages and land-sales contracts			2,383,885.06
Sinking and reserve fund assets:			
Cash resources held by trustees account of bond sinking funds (in addition trustees hold $58,908,500 of redeemed bonds which are not treated as an asset)		974,651.01	
Contingent fund and miscellaneous assets		3,650,906.83	
Insurance and depreciation funds' assets (securities at cost and cash), viz—			
Securities	$9,264,017.29		
Cash	5,892,586.20		
	15,156,603.49		
Less amount of foregoing represented by obligations of subsidiary companies issued for capital expenditures made	6,633,000.00		
		8,523,603.49	
			13,149,161.33
Current assets:			
Inventories	176,067,188.55		
Less surplus representing profits earned by subsidiary companies on intercompany sales of products on hand in inventories, Dec. 31, 1911 (see note opposite)	22,583,599.89		
		153,483,588.66	

Current assets—Continued.		
Accounts receivable	$48,325,472.88	
Bills receivable	6,100,874.27	
Agents' balances	786,758.59	
Sundry marketable bonds and stocks	2,047,100.18	
Cash (in hand and on deposit with banks, bankers, and trust companies subject to check)	43,499,127.78	
		$254,242,922.36
		1,739,288,533.58

We have audited the above balance sheet and certify that in our opinion it is properly drawn up so as to show the true financial position of the United States Steel Corporation and subsidiary companies on Dec. 31, 1911.

PRICE, WATERHOUSE & CO.,
Auditors.

NEW YORK, *March 4, 1912.*

LIABILITIES.

Capital stock of United States Steel Corporation:		
Common	$508,302,500.00	
Preferred	360,281,100.00	
		$868,583,600.00
Capital stocks of subsidiary companies not held by United States Steel Corporation (par value)		596,702.50
Bonded and debenture debt outstanding (for detailed statement see pp. 5240 and 5261):		
United States Steel Corporation 50-year 5 per cent bonds	270,277,000.00	
United States Steel Corporation 10–60-year 5 per cent bonds	189,346,500.00	
	459,623,500.00	
Subsidiary companies' bonds, guaranteed by United States Steel Corporation	78,903,000.00	
Subsidiary companies' bonds, not guaranteed by United States Steel Corporation	81,943,441.84	
Debenture scrip, Illinois Steel Co	31,434.99	
		620,501,376.83
Capital obligations of subsidiary companies authorized or created for capital expenditures made (held in the treasury subject to sale, but not included in assets or liabilities—See p. 5240)	1,326,000.00	
Mortgages and purchase money obligations of subsidiary companies:		
Mortgages	552,922.79	
Purchase money obligations	600,000.00	
		1,152,922.79
Current liabilities:		
Current accounts payable and pay rolls	22,938,620.87	
Bills payable	41,743.59	
Special deposits or loans due employees and others	911,580.14	
Accrued taxes not yet due, including provision for Federal excise tax	6,712,858.36	
Accrued interest and unpresented coupons	8,372,555.73	
Preferred-stock dividend No. 43, payable Feb. 28, 1912	6,304,919.25	
Common-stock dividend No. 33, payable Mar. 30, 1912	6,353,781.25	
		51,636,059.19
Total capital and current liabilities		1,542,470,661.31

Sundry reserve funds:		
Contingent and miscellaneous operating funds	$11,437,335.90	
Pension fund	1,500,000.00	
Insurance funds	10,189,341.29	
		$23,126,677.19
Appropriated surplus to cover capital expenditures (see statement on p. 5254), invested in property account—additions and construction		40,000,000.00
Undivided surplus of United States Steel Corporation and subsidiary companies:		
Capital surplus provided in organization	25,000.000.00	
Balance of surplus accumulated by all companies from Apr. 1, 1901, to Dec. 31, 1911, per table on page 5233	108,691,195.08	
Total surplus exclusive of profits earned by subsidiary companies on intercompany sales of products on hand in inventories Dec. 31, 1911 (see note below)		133,691,195.08
		1,739,288,533.58

NOTE.—The surplus of subsidiary companies representing profits accrued on sales of materials and products to other subsidiary companies and on hand in latter's inventories, which in previous years was carried in consolidated general balance sheet as a part of the surplus, has in this balance sheet been deducted from the amount of inventories included under current assets.

United States Steel Corporation and subsidiary companies' consolidated income account for the fiscal year ended Dec. 31, 1911.

Total earnings of all properties after deducting all expenses incident to operations including those for ordinary repairs and maintenance (approximately $38,000,000), employees' special compensation under bonus plan, provisional allowance for Federal excise tax, payable in 1912, and also interest on bonds and fixed charges of the subsidiary companies, per general profit and loss account, page 5258			$104,305,465.87
Less allowances for depreciation, viz:			
Sinking funds on bonds of subsidiary companies		$1,610,038.99	
Depreciation and extraordinary replacement funds		18,229,059.76	
			19,839,098.75
Net earnings in the year 1911			84,466,367.12
Deduct:			
Interest on United States Steel Corporation bonds outstanding, viz—			
50-year 5 per cent gold bonds		13,613,064.64	
10-60-year 5 per cent gold bonds		9,493,858.48	
Sinking funds on United States Steel Corporation bonds, viz (representing an allowance for depreciation in addition to the $19,839,098.75 deducted above)—			
Annual installment on 50-year 5 per cent gold bonds	$3,040,000.00		
Annual installment on 10-60-year 5 per cent gold bonds	1,010,000.00		
Interest on above bonds in sinking funds	2,090,926.88		
		6,140,926.88	
			29,247,850.00
			55,218,517.12

Deduct—Continued.			
Add net balance of sundry credits and charges, including adjustment of various accounts			$81,779.66
Balance			55,300,296.78
Dividends for the year 1911 on United States Steel Corporation stocks, viz—			
Preferred—			
No. 40, 1¾ per cent, paid May 29, 1911	$6,304,919.25		
No. 41, 1¾ per cent, paid Aug. 30, 1911	6,304,919.25		
No. 42, 1¾ per cent, paid Nov. 29, 1911	6,304,919.25		
No. 43, 1¾ per cent, payable Feb. 28, 1912	6,304,919.25		
		$25,219,677.00	
Common—			
No. 30, 1¼ per cent, paid June 29, 1911	6,353,781.25		
No. 31, 1¼ per cent, paid Sept. 29, 1911	6,353,781.25		
No. 32, 1¼ per cent, paid Dec. 30, 1911	6,353,781.25		
No. 33, 1¼ per cent, payable Mar. 30, 1912	6,353,781.25		
		25,415,125.00	
			50,634,802.00
Surplus net income for the year			4,665,494.78
Undivided surplus on December 31, 1910		105,438,718.67	
Less charges to and appropriations from the foregoing during the year 1911, viz:			
Discount in sale of subsidiary companies' bonds	$750,000.00		
Appropriation for permanent pension fund	663,018.37		
		1,413,018.37	
			104,025,700.30
Total undivided surplus Dec. 31, 1911, exclusive of capital surplus provided in organization and of subsidiary companies' intercompany profits in inventories			108,691,195.08

We certify that in our opinion the above income account is a fair and correct statement of the earnings and income of the United States Steel Corporation and subsidiary companies for the fiscal year ending Dec. 31, 1911.

PRICE, WATERHOUSE & CO.,
Auditors.

NEW YORK, *March 4, 1912.*

United States Steel Corporation and subsidiary companies' condensed general profit and loss account for year ended Dec. 31, 1911.

Gross receipts, gross sales, and earnings (see p. 5257)		$615,148,839.79
Operating charges, viz:		
Manufacturing and producing cost and operating expenses, including ordinary maintenance and repairs and provisional charges for depreciation	[1] $507,973,572.86	
Administrative, selling, and general expenses, employees' special compensation under bonus plan and pension payments (not including general expenses of transportation companies)	16,554,152.67	

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[1] Includes charges for ordinary maintenance and repairs, approximately $38,000,000.

Operating charges, viz—Continued.		
Taxes (including allowance for Federal excise tax)	$9,622,347.23	
Commercial discounts and interest	3,378,133.86	
	537,528,206.62	
Less amount included in above charges for provisional reserves for depreciation now deducted for purpose of showing the same in separate item of charge, as see below	19,839,098.75	
		$517,689,107.87
Balance		97,459,731.92
Sundry net manufacturing and operating gains and losses, including idle plant expenses, royalties received, adjustments in inventory valuations, etc	364,151.20	
Rentals received	593,499.55	
		957,650.75
Total net manufacturing, producing, and operating income before deducting provisional charges for depreciation		98,417,382.67

OTHER INCOME.

Net profits of properties owned, but whose operations (gross revenue, cost of product, expenses, etc.) are not included in this statement	$369,297.13	
Income from sundry investments and interest on deposits, etc	2,435,641.83	
		2,804,938.96
Total		101,222,321.63

INTEREST CHARGES.

Interest on bonds and mortgages of the subsidiary companies	$7,921,246.81	
Interest on purchase-money obligations and special deposits or loans of the subsidiary companies	116,448.38	
		8,037,695.19
Balance, being the aggregate earnings of the several companies for the year before deducting provisional charges for depreciation		93,184,626.44
Add net balance of profits earned by subsidiary companies on sales made and service rendered account of materials which were on hand at first of year in purchasing companies' inventories and which profits have since been realized in cash from the standpoint of a combined statement of the business of the United States Steel Corporation and subsidiary companies		11,120,839.43
Earnings for the year 1911, per income account, page 5257		104,305,465.87
Less allowances for depreciation		19,839,098.75
Net earnings in the year 1911		84,466,367.12

United States Steel Corporation and subsidiary companies—Summary of the financial operations of all properties for year ending Dec. 31, 1911, showing the net resources for the year and the disposition thereof.

Net resources:		
Profit and loss surplus for the year, page 5258		$4,665,494.78
Net receipts appropriated from earnings for bond sinking, depreciation, and extraordinary replacement funds (see income account, p. 5258)	$25,980,025.63	
Receipts during the year for account blast-furnace relining and renewal funds	1,813,184.58	
Sundry receipts credited to the foregoing fund accounts	496,109.63	
	28,289,319.84	

Net resources—Continued.			
Less—			
Payments made therefrom to trustees of bond sinking funds	$8,566,400.83		
Expended for extraordinary replacements	7,077,414.37		
Expended for blast-furnace relining and renewals	1,541,354.38		
		$17,185,169.58	
Balance of receipts for the year for account of above funds			$11,104,150.26
Net receipts during the year account of insurance, contingent, and sundry operating funds			2,533,949.28
Bonds of subsidiary companies issued, sold, and assumed (par)		33,237,000.00	
Less discount in sale of certain of foregoing		750,000.00	
			32,487,000.00
Net realized from disposal of investments made in previous years of depreciation and insurance fund reserves			3,392,317.96
Total net resources for the year			54,182,912.28
Payments made for the following purposes:			
Expended for additional property and construction and for stripping and development work at mines		49,430,861.12	
Bonds and mortgages paid (not including $7,751,000 redeemed by trustees of sinking funds with installments and interest accretions paid them as shown above)		1,557,359.46	
Purchase-money obligations, bills payable, and special deposits paid off		2,459,298.43	
Net additional advances account mining royalties and deferred charges		876,877.08	
Net increase during the year in outside real estate and in other sundry investments		115,667.03	
Payment to trustees of pension-fund account working capital		163,018.37	
			54,603,081.49
Excess of above payments over net resources for the year			420,169.21
The above excess of payments was provided from net working assets, as shown below:			
Decrease in current assets:			
In cash			13,454,386.38
In sundry marketable securities			2,363,693.43
			15,818,079.81
Less the following increases, viz—			
In inventories (exclusive of intercompany profit therein)		10,217,221.49	
In accounts and bills receivable		4,372,817.68	
In sundry general assets		355,442.04	
			14,945,481.21
Decrease in current and general assets			872,598.60
Deduct: Decrease in current liabilities:			
In accounts payable		756,643.17	
increase in accrued taxes and interest		304,213.78	
			452,429.39
Balance, decrease in net working assets			420,169.21

Bonded and debenture debt outstanding, Dec. 31, 1911.

	Total bonds.	Held by trustees sinking funds.	Balance outstanding.	Maturity.	Interest.	
					Rate.	Payable.
United States Steel Corporation 50-year gold bonds	$303,957,000.00	$33,680,000.00	$270,277,000.00	Apr. 1, 1951	5	1-12 monthly.
United States Steel Corporation 10-60-year sinking-fund gold bonds.	200,000,000.00	10,653,500.00	189,346,500.00	Apr. 1, 1963	5	May and November.
Subsidiary companies' bonds guaranteed by United States Steel Corporation:						
Union Steel Co. first-mortgage and collateral-trust	43,832,000.00	9,227,000.00	34,605,000.00	Dec. 1, 1952	5	June and December.
Clairton Steel Co. bonds, viz:						
5 per cent mortgage gold	1,000,000.00		1,000,000.00	$500,000 each July 1	5	January and July.
St. Clair Steel Co. first mortgage	1,400,000.00		1,400,000.00	$100,000 each Jan. 1	5	Do.
St. Clair Furnace Co. first mortgage	2,780,000.00		2,780,000.00	$100,000 each Aug. 1	5	February and August.
Clairton Land Co. first-mortgage gold	1,200,000.00		1,200,000.00	$100,000 each Aug. 1, commencing in 1915.	4. 4	Do.
Illinois Steel Co. debentures of 1940	10,000,000.00		10,000,000.00	Apr. 1, 1940	4½	April and October.
Monongahela So. R. R. Co. first mortgage	1,200,000.00		1,200,000.00	Oct. 1, 1955	5	Do.
Chicago, L. S. & E. Ry. Co. first mortgage	9,000,000.00		9,000,000.00	June 1, 1969	4½	June and December.
H. C. Frick Coke Co., Pittsburgh-Monongahela purchase money mortgage.	[1] 17,712,000.00		17,712,000.00	$600,000 each July 1, commencing in 1915.	5	January and July.
Subsidiary companies' bonds not guaranteed by United States Steel Corporation:						
Manufacturing companies—						
Carnegie Steel Co. bonds, viz—						
The Carnegie Co. collateral trust	43,000.00		43,000.00	Apr. 1, 2000	5	
Rosena Furnace Co. first mortgage	250,000.00		250,000.00	Dec. 1, 1912	5	June and December.
Schoen Steel Wheel Co. first mortgage	1,088,000.00		1,088,000.00	Mar. 1, 1926	5	March and September.
Illinois Steel Co. bonds, viz, nonconvertible debenture.	6,900,000.00		6,900,000.00	Apr. 1, 1913	5	April and October.
The Lorain Steel Co. bonds, viz, the Johnson Co. first mortgage.	300,000.00		300,000.00	$100,000 each Sept. 1	6	March and September.
United States Steel Products Co. bonds, viz, Risdon Iron & Locomotive Works first mortgage.	600,000.00		600,000.00	July 2, 1917	5	January and July.
American Sheet & Tin Plate Co. bonds, viz, W. Dewees Wood Co. first mortgage.	2,000,000.00		2,000,000.00	$100,000 each May 1, 1915, to 1929; $500,000 May 1, 1930.	5	May and November.
Tennessee Coal, Iron & R. R. Co. bonds, viz—						
Consolidated mortgage (Tennessee division).	1,374,000.00	267,000.00	1,107,000.00	Jan. 1, 1917	6	April and October.
Purchase money and improvement mortgage (Birmingham division).	4,175,000.00	178,000.00	3,997,000.00	Jan. 1, 1917	6	January and July.
General mortgage	7,089,000.00		7,089,000.00	July 1, 1951	5	Do.
Cahaba Coal Mining Co. first mortgage	892,000.00		892,000.00	Dec. 1, 1922	6	June and December.
Alabama Steel & Shipbuilding Co. first mortgage.	730,000.00		730,000.00	Jan. 1, 1930	6	January and July.

[1] $1,212,000 of this total not yet delivered.

Bonded and debenture debt outstanding, Dec. 31, 1911—Continued.

	Total bonds.	Held by trustees sinking funds.	Balance outstanding.	Maturity	Interest.	
					Rate.	Payable.
Subsidiary companies' bonds not guaranteed by United States Steel Corporation—Continued.						
Manufacturing companies—Continued.						
Tennessee Coal, Iron & R. R. Co. bonds, viz—Continued.						
Potter Ore Co. first-mortgage bonds (half of issue), the bonds being guaranteed jointly by Tennessee Coal, Iron & R. R. Co. and Republic Iron & Steel Co.	$314,500.00		$314,500.00	Dec. 1, 1931	5	June and December.
Coal and coke companies—						
H. C. Frick Coke Co. bonds, viz—						
First mortgage	700,000.00		700,000.00	$100,000 each July 1	5	January and July.
Continental Coke Co. purchase money mortgage.	296,000.00		296,000.00	$37,000 each Apr. 27	4½	Annually.
Host.-Conn. Coke Co. first mortgage	696,000.00		696,000.00	July 1, 1942	5	February and August.
Sharon Coke Co. first mortgage	422,000.00		422,000.00	Dec. 2, 1931	5	June and December.
Little Vermilion Coal Co. first mortgage	96,000.00		96,000.00	July 1, 1920	5	January and July.
Transportation companies—						
Union Railroad Co. bonds, viz.—						
First mortgage	2,000,000.00		2,000,000.00	Sept. 1, 1946	5	March and September.
Duquesne equipment trust	1,150,000.00		1,150,000.00	$100,000 each Mar. 1, commencing in 1914.	5	Do.
Mifflin equipment trust	1,200,000.00		1,200,000.00	$120,000 each Aug. 1, commencing in 1921.	5	February and August.
*P., B. & L. E. R. R. Co. bonds, viz.—						
First mortgage consolidated	6,409,000.00		6,409,000.00	Jan. 1, 1947	5	January and July.
Debenture gold	2,000,000.00		2,000,000.00	June 1, 1919	5	June and December.
Pittsburgh, Shenango & Lake Erie R. R. Co. bonds, viz.—						
First mortgage	2,994,000.00		2,994,000.00	Oct. 1, 1940	5	April and October.
First mortgage consolidated	597,000.00		597,000.00	July 1, 1943	5	January and July.
Shenango equipment trust	146,000.00		146,000.00	$73,000 each Apr. 1	5	April and October.
Greenville equipment trust	900,000.00		900,000.00	$100,000 each May 1	5	May and November.
Butler equipment trust	2,050,000.00		2,050,000.00	Apr. 1, 1921	5	April and October.
Bessemer & Lake Erie R. R. Co. bonds, viz.—						
Erie equipment trust	1,220,000.00		1,220,000.00	Mar. 1, 1922	5	March and September.
Locomotive equipment trust	150,000.00		150,000.00	Mar. 1, 1913	5	Do.
Standard equipment trust	1,060,000.00		1,060,000.00	Apr. 1, 1925	5	April and October.
Bessemer equipment trust	1,100,000.00		1,100,000.00	$110,000 each Mar. 1, commencing in 1918.	5	March and September.
Conneaut equipment trust	300,000.00		300,000.00	Apr. 1, 1919	5	April and October.
National equipment trust	160,000.00		160,000.00	$40,000 each May 1	5	May and November.

Meadville equipment trust	550,000.00		550,000.00	$55,000 each Mar. 1, commencing in 1921.	5	March and September.
Elgin, Joliet & Eastern Ry. Co., first mortgage.	10,000,000.00		10,000.000.00	May 1, 1941	5	May and November.
Duluth & Iron Range R. R. Co. bonds, viz.—						
First mortgage	8,151,000.00		8,151,000.00	Oct. 1, 1937	5	April and October.
Second mortgage	1,000,000.00		1,000,000.00	Jan. 1, 1916	6	January and July.
Duluth, Missabe & Northern Ry. Co. bonds, viz.—						
First division first mortgage	1,174,000.00		1,174,000.00	Jan. 1, 1922	6	Do.
Consolidated first mortgage	2,326,000.00	$1,561,000.00	765,000.00	Jan. 1, 1923	6	Do.
General mortgage	11,761,000.00	730,000.00	11,031,000.00	Jan. 1, 1941	5	Do.
Pittsburgh Steamship Co. bonds, viz.—						
First mortgage	750,000.00		750,000.00	$188,000 each Jan. 1	5	Do.
American Steamship Co. first mortgage	5,630,000.00	2,449,000.00	3,181,000.00	Nov. 1, 1920	5	May and November.
St. Clair Terminal R. R. Co. first mortgage	750,000.00		750,000.00	Feb. 1, 1932	5	February and August.
Connellsville & Monon. Ry. Co. first mortgage.	1,007,000.00	163,000.00	844,000.00	Sept. 1, 1930	4	March and September.
Sundry matured bonds unpresented for payment.	16,000.00		16,000.00			
Total			627,689,000.00			
*Less proportion of bonds outstanding account minority interest in stock of P., B. & L. E. R. R. Co. not owned.			7,219,058.16			
Total bonds			620,469,941.84			
Illinois Steel Co. debenture scrip (payable Apr. 1, 1913).			31,434.99			
Grand total outstanding		58,908,500.00	620,501,376.83			
Treasury bonds subject to sale:						
Illinois Steel Co. debenture gold bonds of 1940		$614,000.00		Apr. 1, 1940	4½	April and October.
Youghgahela Water Co. first mortgage		350,000.00		$25,000 each June 1	5	June and December.
Union Steel Co. first mortgage and collateral trust		[1] 362,000.00		Dec. 1, 1952	5	Do.
		1,326,000.00				

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[1] Authorized but not created.

United States Steel Corporation and subsidiary companies—earnings by months and quarters from Jan. 1, 1907, to Dec. 31, 1911.

Months.	1907	1908	1909	1910	1911
January	$12,838,703.25	$5,052,743.24	$7,262.605.62	$11,316,013.95	$5,869,416.35
February	12,145,814.95	5,709,427.64	7,669,335.70	11,616,861.41	7,180,928.04
March	14,137,973.85	7,466,834.23	7,989.327.43	14,684,001.20	10,468,858.90
First quarter	39,122,492.05	18.229.005.11	22,921,268.75	37,616,876.56	23,519,203.29
April	14,600,837.97	6,761,680.59	8,163,244.48	13,414,956.00	9,412,572.79
May	16,056,832.06	6,021,278.73	9,661,227.76	13,229,289.14	9,590,443.99
June	14.846,034.82	7,482.796.54	11,516,019.38	13,526,715.69	9,105,503.45
Second quarter	45,503,704.85	20,265,755.86	29.340.491.62	40,170,960.83	28,108,520.23
July	13,804,167.34	8.599,630.15	12,530,769.84	12,132,188.06	8,750,467.08
August	15.279,172.67	9,152,311.13	12,437,754.28	13.132,755.35	10,710,144.66
September	14,720,945.15	9,354,333.42	13.278.383.31	12.100,243.84	10,062,112.84
Third quarter	43,804,285.16	27.106.274.70	38,246,907.43	37,365,187.25	29,522,724.58
October	17.052,210.70	9.415.667.63	14,048,205.13	10,512,130.67	9.159,338.87
November	10,467,252.60	8,756,728.90	13,711,764.67	8,228,857.08	6,946,716.82
December	5,014,728.36	8.074,278.37	13,222,776.34	7,160,742.12	7,048,962.08
Fourth quarter	32,534,191.66	26,246.674.90	40,982,746.14	25,901.729.87	23,155,017.77
Total for year	160,964,673.72	91,847.710.57	131,491,413.94	141,054,754.51	104,305,465.87

EXPENDITURES FOR EXTRAORDINARY REPLACEMENTS DURING THE FISCAL YEAR ENDING DECEMBER 31, 1911.

These expenditures were paid from funds provided currently from earnings to cover requirements of the character included herein. (See p. 5236.) The expenditures for the year, classified by property groups, are as follows:

Manufacturing properties	$4,690,322.87
Coal and coke properties	575,872.46
Iron-ore properties	98,628.25
Transportation properties	1,704,056.64
Miscellaneous properties	8,534.15
Total	7,077,414.37

The principal replacement and improvement work covered by the foregoing expenditures is shown below:

MANUFACTURING PROPERTIES.

Carnegie Steel Co.—Work completed during the year: Homestead Works—Storage building for steel and overhead traveling crane at 38-inch mill; crane runway over shears at 32-inch mill and extension to tables, etc.; retaining wall along right of way of Pittsburgh, McKeesport & Youghiogheny Railroad; 14 automatic damper regulators for boilers. Carrie furnaces—Gas main connecting flues of blast furnaces Nos. 3 and 4 with furnaces Nos. 1, 2, and 5; reconstructing 2 hot-blast stoves at furnace No. 1; new 150-ton track scale. Schoen Steel Wheel Works—New steel boiler and power station buildings. Duquesne Works—New slag granulating pit at blast furnace No. 4 and extension of overhead crane runway; 12 power-operated cinder ladles. Edgar Thomson Works—Strengthening blast furnace stock yard trestles; installing cooling plates above mantle, blast furnaces G and K; 35-power operated cinder ladles. Isabella furnaces—Cooling plates, water connections, and equipment. Edith furnace—Rebuilding ore yard, cast house, and trestle. Painter Works—One 500-horsepower motor for 8-inch mill. New Castle Works—New bedplates for blowing engines, blast furnace No. 1, and general improvement of the furnace; new motor-driven planer for machine shop. Ohio Works—Moving and rebuilding Nos. 1 and 2 pig casting machines; installing 8 Venturi recording meters on feed water lines; floors on skip bridges to protect employees at blast furnaces Nos. 1 and 2. Bellaire Works—Concrete retaining wall to protect coal tracks. Mingo works—Overhead gas flues at blast furnaces Nos. 2 and 3; removing 750-horsepower boilers from steel plant to blast-furnace boiler house; cooling systems above mantles, blast furnaces Nos. 2 and 3.

Work in progress: Homestead Works—Reconstructing the 23 and 33 inch mill boiler-house trestle; new water tank and by-pass pipe connections, main water works; equipping 47 boilers with new drums. Carrie furnaces—Replacement to steel work on 8 hot-blast stoves, furnaces Nos. 3 and 4. Edgar Thomson Works—Rebuilding hot saw roller table, No. 1 rail mill. New Castle Works—New bedplate for blooming mill engine. Mingo Works—New engine and driving gear for No. 2 group of stands, 18-inch continuous mill. Lower Union Works (Youngstown)—New 150-ton track scale. Upper Union Works (Youngstown)—Replacing steam with electric power for driving auxiliary machinery, enlargement of electric power plant, new electrically driven pumps and changes in water system, and additional electric motors; additional machine-shop equipment.

Illinois Steel Co.—Work completed during the year: South Works—Installing 4 gas-driven blowing engines at furnaces Nos. 5 to 8; gas main to plate-mill boilers; new gas washer; equipping structural mill No. 1 for rolling sections from 18 to 24 inches; 2 new sanitary buildings; remodeling blast furnaces Nos. 2 and 7. Joliet Works—New heating furnace in billet mill; installing 5 new gas exhausters; 4 roll-thread machines; strengthening roof of converter building; reconstructing the iron and roll-foundry building. Milwaukee Works—5 new sanitary buildings; 2 stands of rolls for 8-inch mill. North Works—New machine tools.

Work in progress: South Works—New steel coal trestle at rail mill; rebuilding ore-unloading trestles at furnaces Nos. 5 to 10; equipment for removing dust, blast furnace E; remodeling top of blast furnace No. 10. Joliet Works—New electric power plant and electric motors, replacing steam power (see also Construction detail; extending the high-pressure water system for additional fire protection; equipping 26 electric overhead traveling cranes with safety appliances; new sewer from converting mill.

Universal Portland Cement Co.—Work completed during the year: 16 slow-speed motors for tube-mill drives, cement plant No. 3; new car haulage system at stock houses, cement plants Nos. 3 and 4; equipment for safety of employees, cement plants Nos. 3, 4, 5, and 6.

National Tube Co.—Work completed during the year: National Works—Increasing facilities of No. 3 lap-weld mill to manufacture 24-inch O. D. pipe; installing cold-sawing equipment at Nos. 2, 3, and 4 lap-weld mills; rebuilding the settings of boilers Nos. 1 to 8, boiler house B; strengthening runway of overhead traveling crane, pipe-mill building; new pinion housings for 110-inch plate mill. Riverside Works—Additions and improvements for fire protection. Pennsylvania Works—New steel-trestle connection with Baltimore & Ohio Railroad; 3,500 feet additional storage tracks. Continental Works—Changing Nos. 1 and 2 butt weld mills from steam to motor drive and additional equipment. Kewanee Works—Heating, ventilating, and sanitary equipment in foundries and other departments.

Work in progress: National Works—Steel storage bins for welding bells and balls; remodeling furnace top, blast furnace No. 4, and gas cleaning plant; additional finishing equipment in galvanizing works, Versailles; enlarging coupling shop building and additional overhead traveling crane; safety devices to protect employees; equipment for fire protection. Kewanee Works—Machinery and equipment for finishing and testing cast-iron flange fittings etc.; equipment to manufacture flat bead malleable iron fittings.

The National Tube Co.—Work completed during the year: Lorain Works—160-foot addition to No. 1 machine shop, together with new tool equipment; fireproof shed over Larry car runway at stock bins, blast furnaces Nos. 1, 2, and 5; additional tools for threading new type California joint casing, Nos. 2, 3, and 4 lap-weld mills; 6 straightening presses for rail mill cold finishing department; 2 100-ton track scales and narrow gauge tracks; new air compressor; subway under railway tracks at entrance to skelp mills; strengthening rear track of Hulett ore-unloading machines; installing safety devices at blast furnace No. 1.

Work in progress: Lorain Works—Fourteen 40-ton iron ladles and 12 iron ladle cars; alterations to Bessemer mixer building; 75-ton electric overhead traveling crane; equipment to mechanically hook drawing tongs, Nos. 1 to 6 butt weld mills; 2 roll grinding machines for skelp mill roll shop.

Shelby Steel Tube Co.—Work completed during the year: Standard Works—Enlarging the general office building; eliminating woodwork, protecting wiring, and general improvements for fire protection.

American Steel & Wire Co.—Work completed during the year: Newburgh Steel Works—Strengthening overhead crane runway in open-hearth scrap yard. Newburgh Wire Works—Extension to office building; two new rod-storage sheds; additional ash-handling machinery at boiler house; acid storage system in galvanizing department. Central Furnaces—New blast furnace D (see also Construction detail); improvements to blast furnace B; new laboratory; retaining wall along railroad. Central Furnace Docks—Increasing facilities for unloading ore. American Works—

Additions to the central boiler plant equipment. Consolidated Works—New roughing mill engine; 3 new gas producers; renewal of nail machines. H. P. Works—New warehouse at west mill; power improvements in east and west mills, including new low-pressure turbine generator with drive and auxiliary equipment. Salem Works—New muffle furnace and extending annealing building; 4 cement coating machines. Waukegan Works—Additional spring-mill machinery and extension of building (see also Construction detail); reconstructing walls of general warehouse; equipping 26 bale-tie machines for continuous operation; new annealing furnace; 1 roll grinding machine. Rockdale Works—Rebuilding the cleaning house; improved wire handling facilities in annealing building; subway under railroad tracks at entrance to works. De Kalb Works—New building for stationery department; new heating systems; raising roof over fence machines, building No. 9; equipment for fire protection. Anderson Works—Heating system for cleaning house; additional storage capacity for acid. Shoenberger Works—Equipment for handling and granulating slag; increasing height of hot-blast stove, furnace No. 1. Rankin Works—Enlarging the cooper shop; new building and extending the nail-cleaning department; exhaust-fan system in carpenter shop. Allentown Works—Extension to No. 3 storage shed; 20 additional wire trucks. Trenton Works—New carpenter and pattern shop; emergency hospital; new pump house; addition to electric power equipment. Worcester, North Works—Strengthening and improving coal trestle; vacuum ash-handling system at main boiler plant; 2 rod-storage sheds; stock room for finished and process wire; 14 new cold rolling machines; 2 additional annealing furnaces and 1 tempering furnace. Worcester, South Works—Emergency escape from crane cabs in open-hearth department; new lifting magnet. Worcester, Cable Works—24 braiders for weatherproof wire. New Haven Works—New water pumping equipment; increasing wire-storage space; remodeling pot annealing furnaces; 100 additional wire trucks.

Work in progress: Newburgh Steel Works—3 new gas producers, with mechanical coal-handling equipment at rod mill. Newburgh Wire Works—Installation of facilities for utilizing waste gases from galvanizing department for heating dry house, mill No. 1. Central furnaces—Improvements in electric power station and additional equipment; new air compressor. Central furnace docks—Safety equipment on ore-unloading machinery. Consolidated Works—Sewer connecting the plant with city sewerage system. H. P. Works—Improvements in nail-galvanizing department. Salem Works—Enlarging dry house. Anthony Works—Pipe connection with city water mains and equipment for fire protection. De Kalb Works—Relocation of nail department; new nail-storage warehouse. Anderson Works—Replacement of nail machines. Shoenberger Works—New floor in horseshoe warehouse. Rankin Works—Equipment to manufacture metal reels for barbed wire. Trenton Works—Enlarging electric power plant (see also Construction detail); additional storage and shipping facilities in rod mill. Worcester, North Works—Additions to electro-galvanizing equipment; filtering system for waste water from gas house; 4 automatic coiling and testing machines. Pacific Works—New water pumping and storage system for increased supply and additional fire protection. Improvements in galvanizing departments.

American Sheet & Tin Plate Co.—Work completed during the year: Vandergrift Works—New ingot stripper; strengthening runway of overhead traveling crane; new electric annealing furnace; new steam pump, hydrants, and water lines for fire protection; installing fire-alarm system; new testing machine. New Castle Works—Six tinning machines; increasing assorting-room facilities; enlarging tin-plate warehouse and new storehouse. National Works—Rebuilding hot-mill engine; additional annealing furnace. Wood Works—Installing safety devices throughout plant. Monongahela Works—New coal trestle; equipping 18 tinning stacks with Cronemeyer catchers. Scottdale Works—Replacing hot-mill engine No. 2. Pittsburgh Works—New general-office building; new 400-horsepower water-tube boiler; additional machine-shop equipment. Pennsylvania Works—New 400-horsepower water-tube boiler. Ætna Standard Works—Installing new grates at boiler plant and 10-inch steam line. Laughlin Works—New building for manufacturing flux; concrete retaining wall along railroad tracks; new bed and cylinders for cold mill engine; four motor-driven doubling shears. La Belle Works—Improvements to steam-power plant. Dover Works—Additional pump for the water-supply station; new sheet and pair furnace for 36-inch widths. Cambridge Works—New floor, with steel runways, in warehouse. Crescent Works—New brick power house and installation of equipment; new 10-ton overhead electric traveling crane and strengthening runways. Roll and Machine Works—Extending power-house facilities. Chester Works—New bed and cylinders for hot-mill engine; heating system for assorting room and warehouse.

Work in progress: Vandergrift Works—New emergency hospital; new steel coal trestle; steel pouring platform in open-hearth department; increasing the electric power plant facilities. Wood Works—Enlarging four pair furnaces, Mills Nos. 3 and 6. Pittsburgh Works—New steel coal trestle. Pennsylvania Works—Two new pair furnaces, Mills Nos. 7 and 8. Guernsey Works—Replacing 300 feet of hot-mill building with steel construction; strengthening the overhead crane runway.

Sharon Tin Plate Co.—Work completed during the year: Sharon Works—Additional pumping facilities in power house; new emergency hospital.

American Bridge Co.—Work completed during the year: Ambridge Works—Additional foundry machinery. Pencoyd Works—New manipulator for blooming mill; water-pipe line for fire protection; one 80-foot boring and drilling machine and one heavy drill press. Shiffler Works—Addition to office building. American Works—New machine, rivet, and templet shops and installation of equipment. Minneapolis Works—Equipping plant with electric motors.

Work in progress: American Works—New boiler house and boilers, new engine house, engine, and generator; rebuilding punch shop and removing old forge shop and equipment.

Union Steel Co.—Work completed during the year: South Sharon Works—Cooling system, blast furnace No. 1; steam line from blast furnaces to skelp and bar mill; ash conveyor for gas producers at open-hearth furnaces; new concrete floors in power and engine houses; new plate straightening machinery in plate mill; track and equipment to convey wire between galvanizing and woven-fence departments. Donora Works—Water supply to cooling plates at blast furnaces Nos. 1 and 2; extension to rod-baking equipment; exhaust system to dispose of dust in nail-cleaning department; 100 additional wire trucks.

Work in progress: South Sharon Works—Partition wall and new floor for woven-fence warehouse; acid-storage system; two take-up frames in galvanizing department. Donora Works—Remodeling the nail-packing department.

Tennessee Coal, Iron & Railroad Co.—Manufacturing plants—Work completed during the year: Ensley Works—Ingot-mold casting plant; rearrangement of Larry car-truck system at blast furnaces; three 35-ton ladles; 30 ingot-mold cars. Bessemer Rolling Mill—Enlargement of boiler plant, including 2 new 500-horsepower Stirling boilers; remodeling 10-inch roughing mill.

Work in progress: Ensley Works—New bathhouse; water-supply mains for steel plant; 20 cars and 20 boxes for slag, open-hearth department.

Ore, coal, and limestone properties—Work completed during the year: Greeley Mines—New boom and hoisting engine for steam shovel. Pratt Mines—Additional electric-power line; 100 steel mine cars. Blue Creek Mines—New electric hoisting plant; ventilating fan and motors.

Work in progress: Blossburg Mines—New ventilating fan, Mine E.

Birmingham Southern Railroad Co.—Work completed during the year: Rebuilding 100 wooden freight cars.

COAL AND COKE PROPERTIES.

H. C. Frick Coke Co.—Work completed during the year: As part of a general plan to better the living and sanitary conditions surrounding the various works, affecting the welfare of employees, expenditures totaling $273,700.61 were made for improvements to tenement houses and the drainage systems therefor and surroundings thereto, at 40 of the coke plants. Other work completed included: Collier Works—New air compressor; new bathhouse. Kyle Works—Underground fireproof stable. Continental No. 1 Works—Retimbering 100 feet of hoisting shaft. Leith Works—Fifteen new dwellings. Redstone Works—New underground fireproof stable. Edenborn Works—Additional ventilating and escape shaft. Footedale Works—New air compressor and five coal-mining machines. Juniata Works—Twelve double dwellings; new masonry and I beam shaft bottom. Leisenring No. 1 Works—Swimming pool. Leisenring No. 3 Works—Underground fireproof stable. Trotter Works—Equipping boiler plant to burn coke-yard waste. Mammoth Works—Ten new dwellings; reconstructing headframe and coal bin; improvements to shaft bottom. Calumet Works—Extending air-motor haulage system to dip workings; reconstructing headframe and coal bin. Brinkerton Works—New pit mouths and extension of haulage system. Hecla No. 2 Works—New air compressor; addition to compressor house. Central Works—Gravity drain for left section of mine.

Work in progress: Edenborn Works—New fireproof pump room and discharge-bore holes. Juniata Works—New gravity-plane incline. Southwest No. 3 Works—Consolidating Nos. 3 and 4 mine working and haulage equipment. Mammoth Works—Additional pumping facilities for the dip section.

At the Hostetter Works of the Hostetter-Connellsville Coke Co. an auxiliary tail-rope haulage system is being installed.

At the Pocahontas (W. Va.) coal mines additions have been made to the haulage systems, and three new electric locomotives, 50 steel and 100 wooden mine cars acquired. There is being constructed a new water-supply system for domestic use and fire protection.

ORE PROPERTIES.

Work completed during the year: Chapin Mine—Remodeling hoisting plant, Shaft B. Lake Superior Mine—New steel shaft house with rock and ore trestles, Section 16 mine; rebuilding crusher and three new boilers, Hard Ore mine. Norrie-Aurora Mine—New change house, East Norrie Shaft D; new change house and captain's office, Pabst Shaft G. Soudan Mine—New coal trestle, shaft No. 8. Hull-Rust Mine—New coaling dock and approach. Chisholm Mine—Installing hoisting plant, transferred from Adams mine, at shaft No. 2. Leonard Mine—Enlarging change house. Spruce Mine—Steam line from No. 4 boiler house to No. 1 engine house.

Work in progress: Chapin Mine—New steel shaft house, Hamilton shaft No. 2.

TRANSPORTATION COMPANIES.

Bessemer & Lake Erie Railroad.—Expenditures aggregating $750,171.80 (of which there were charged to property account $262,509.95), include $155,199.38 for new second tracks; $23,777.31 for sundry items of right of way and purchase of real estate; $102,662.62 for 17-stall roundhouse, new coaling station, and boiler washout system at Greenville, and for new office, station, and other buildings; $131,981.19 for filling and improving grades, completing 4-track swing bridge over Conneaut Creek, double track bridge at Shenango, and bridge over French Creek; $311,559.66 for yard tracks, sidings, and elimination of grade crossings; $18,708.66 for extending the telephone train-dispatching circuits.

Union Railroad.—Expenditures of $159,648.99 included $122,467.41 for filling and extension of yard at North Bessemer; $12,387.19 for buildings at various points; $22,476.14 for a switch engine and a locomotive crane.

Duluth & Iron Range Railroad.—Expenditures of $347,788.09 were made in the reconstruction of ore dock No. 1 and rebuilding flat and box cars.

Pittsburgh Steamship Co.—Expenditures aggregating $458,658.52 included the purchase of a 12,000-ton steamship to replace steamers lost or disposed of; $122,457.18 for renewing tank tops and plating sides of steamers in holds; $31,880.51 for improvements to boilers; $24,340.35 for new deck cabins and replacing wooden with cement floors.

Pittsburgh & Conneaut Dock Co.—Expenditures aggregating $35,139.21 included $12,767.12 for completing the new concrete dock south of Dock No. 1 and enlarging winding basin; $22,372.09 for new concrete dock south of Dock No. 4 and for concrete walls supporting ore-storage bridges, replacing timber trestle.

Pennsylvania & Lake Erie Dock Co.—Expenditures aggregating $33,446.31 covered outlays for rebuilding Dock No. 3 with concrete construction and new brick shelter and repair shop.

MISCELLANEOUS PROPERTIES.

At the pumping station, Hundred, W. Va., four additional compressors were completed, and at Leisenring Works No. 3 a new store building is being constructed.

Summary of manufacturing plants owned by subsidiary companies of United States Steel Corporation Dec. 31, 1911.

Name of operating company.	Number of works.	Blast furnaces.	Steel works.		Rolling mills.												Wire mills.					Pipe and tube works.		Tin plate mills.	Bridge and structural plants.	Galv. and tinning depts.		Splice bar and rail joint shops.	Spike, bolt, or nut factories.	Departments for cold-rolled products.	Iron, steel, or brass foundries.	Sulphate of iron plants.	Cement plants.	Warehouses.	Miscellaneous works.
			Bessemer converters.	Open hearth furnaces.	Blooming, large billet, and slabbing mills.	Small billet and sheet bar mills.	Rail mills.	Universal plate mills.	Sheared plate mills.	Structural shape mills.	Wire rod mills.	Skelp mills.	Merchant mills.	Hot mills-black plate for tinning.	Sheet, jobbing, and plate mills.	Piercing and rolling mills for seamless tubing.	Wire drawing mills.	Nail mills.	Barbed and woven fence departments.	Spring works.	Rope and electrical works.	Welding pipe furnaces.	Seamless tube mills.			Galvanizing departments.	Tinning departments.								
Carnegie Steel Co.	29	51	16	115	19	8	4	4	5	7	...	1	46	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2	2	...	3	...	...	3	(1) Axle works. (1) Armor plate plant. (2) Steel car wheel plants. (1) Forge department.
Illinois Steel Co.	5	19	6	25	5	1	2	1	2	2	2	...	9	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	2	...	...	1	(1) Paint factory.
Indiana Steel Co. (Gary)	1	8	...	42	2	2	1	1	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	(1) Axle works.
Illinois Steel Warehouse Co.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	
The Lorain Steel Co.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	(1) Frog and switch works.
Am. Steel & Wire Co.	34	12	4	17	5	...	...	...	1	...	17	...	6	...	2	...	19	12	13	3	5	...	...	...	...	15	8	...	...	5	3	7	...	27	(1) Horse shoe department. (1) Shafting department. (2) Zinc smelting works.
National and other tube companies.	12	11	7	6	5	...	1	2	2	...	...	14	3	...	...	10	...	...	...	...	...	52	3	...	...	4	...	1	...	...	6	1	...	...	(2) Puddling mills. (1) Job works. (1) Thread protector works.
Am. Sheet & Tin Plate Co.	34	...	...	10	1	3	...	...	...	...	...	...	...	215	186	...	...	...	...	...	...	...	...	15	...	6	...	...	...	...	1	1	...	33	(1) Sulphuric acid plant. (1) Puddling mill. (1) Forge department.
American bridge Co.	16	...	...	11	1	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	16	1	...	...	2	...	4	...	...	...	(2) Forge departments. (1) Eye bar works. (1) Steel barge yard. (1) Fabricating department for power transmission towers.
Union Steel Co.	2	5		24	2	1	...	1	...	...	4	...	...	20	5	...	2	2	2	...				1		2	...	...	...	...	...	2		4	

Summmary of manufacturing plants owned by subsidiary companies of United States Steel Corporation Dec. 31, 1911—Continued.

			Steel works		Rolling mills.												Wire mills.					Pipe and tube works.				Galv. and tinning dept's.									
Name of operating company.	Number of works.	Blast furnaces.	Bessemer converters.	Open hearth furnaces.	Blooming, large billet and slabbing mills.	Small billet and sheet ber mills.	Rail mills.	Universal plate mills.	Sheared plate mills.	Structural shape mills.	Wire rod mills.	Skelp mills.	Merchant mills.	Hot mills-black plate for tinning.	Sheet, jobbing, and plate mills.	Piercing and rolling mills for seamless tubing.	Wire drawing mills.	Nail mills.	Barbed and woven fence departments.	Spring works.	Rope and electrical works.	Welding pipe furnaces.	Seamless tube mills.	Tin plate mills.	Bridge and structural plants.	Galvanizing departments.	Tinningdepartments.	Splice bar and rail joint shops.	Spike, bolt or nut factories.	Departments for cold-rolled products.	Iron, steel, or brass foundries.	Sulphate of iron plants.	Cement plants.	Warehouses.	Miscellaneous works.
Clairton Steel Co.	1	3	...	12	2	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Tennessee C., I. & R. R. Co.	7	16	2	8	2	...	1	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	
Universal Portland Cement Co.	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	Annual output, 12,000,000 barrels.
U. S. Steel Products Co.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	
Grand total	149	125	35	270	44	15	9	9	11	13	23	15	74	235	193	10	21	14	15	3	5	52	3	16	19	28	8	4	5	5	24	11	5	70	(24) Miscellaneous works.

Summary of manufacturing plants owned by subsidiary companies of United States Steel Corporation Dec. 31, 1911.

Operating company and name and location of works.	Number of works.	Blast furnaces.	Steel works.		Rolling mills.												Wire mills.					Pipe and tube works.		Tin plate mills.	Bridge and structural plants.	Galv. and tinning depts.		Splice bar and rail joint shops.	Spike, bolt, or nut factories.	Departments for cold-rolled products.	Iron, steel, or brass foundries.	Sulphate of iron plants.	Cement plants.	Warehouses.	Miscellaneous departments. (See footnotes.)
			Bessemer converters.	Open hearth furnaces.	Blooming, large billet, and slabbing mills.	Small billet and sheet bar mills.	Rail mills.	Universal plate mills.	Sheared plate mills.	Structural shape mills.	Wire rod mills.	Skelp mills.	Merchant mills.	Hot mills-black plate for tinning.	Sheet, jobbing, and plate mills.	Piercing and rolling mills for seamless tubing.	Wire drawing mills.	Nail mills.	Barbed and woven fence departments.	Spring works.	Rope and electrical works.	Welding pipe furnaces.	Seamless tube mills.			Galvanizing departments.	Tinning departments.								
CARNEGIE STEEL CO.																																			
Edgar Thomson Works, Bessemer, Pa.	1	11	4		1		3																					1			1				
Duquesne Works, Cochran, Pa.	1	6		32	3	2							5																						
Homestead Works, Munhall, Pa.	1		2	[1]65	6			2	4	3			1												1				1		1				(2)
Carrie Furnaces, Rankin, Pa	1	7																																	
Lucy Furnaces, Fifty-first Street, Pittsburgh, Pa.	1	2																																	
Isabella Furnaces, Etna, Pa.	1	3																																	
Upper Union Works, Thirty-third Street, Pittsburgh, Pa.	1							2		3			2												1			1	1						
Lower Union Works, Twenty-ninth Street, Pittsburgh, Pa.	1								1				3																						(3)
Pittsburgh Warehouse, Twelfth Street, Pittsburgh, Pa.	1																																	1	
Howard Axle Works, Homestead, Pa.	1																																		(4)
McCutcheon Works, Allegheny, Pa.	1												5																						
Painter Works, South Side Pittsburgh, Pa.	1												7																						
Clark Works, Thirty-fifth Street, Pittsburgh, Pa.	1												6																						
Schoen Wheel Works, McKees Rocks, Pa.	1																																		(5)
Greenville Works, Greenville, Pa.	1												3																						
Monessen Works, Monessen, Pa.	1												2																						
New Castle Works, New Castle, Pa.	1	4	2		2	1																													
Sharon Works, Sharon, Pa.	1	1		6	1					1																									
Columbus Works, Columbus, Ohio.	1	2	2		1	1																													

[1] Includes 1 electric steel furnace.

[2] 1 armor plate plant and 1 steel car wheel plant.

[3] 1 forge department.

[4] 1 axle works.

[5] 1 steel car wheel plant.

Summmary of manufacturing plants owned by subsidiary companies of United States Steel Corporation Dec. 31, 1911—Continued.

Operating company and name and location of works.	Number of works.	Blast furnaces.	Steel works.		Rolling mills.												Wire mills.					Pipe and tube works.		Tin plate mills.	Bridge and structural plants.	Galv. and tinning depts.		Splice bar and rail joint shops.	Spike, bolt, or nut factories.	Departments for cold-rolled products.	Iron, steel, or brass foundries.	Sulphate of iron plants.	Cement plants.	Warehouses.	Miscellaneous departments. (See footnotes.)
			Bessemer converters.	Open hearth furnaces.	Blooming, large billet, and slabbing mills.	Small billet and sheet bar mills.	Rail mills.	Universal plate mills.	Sheared plate mills.	Structural shape mills.	Wire rod mills.	Skelp mills.	Merchant mills.	Hot mills-black plate for tinning.	Sheet, jobbing, and plate mills.	Piercing and rolling mills for seamless tubing.	Wire drawing mills.	Nail mills.	Barbed and woven fence department.	Spring works.	Rope and electrical works.	Welding pipe furnaces.	Seamless tube mills.			Galvanizing departments.	Tinning departments.								
CARNEGIE STEEL CO.—continued.																																			
Zanesville Works, Zanesville, Ohio	1	1																																	
Niles Works, Niles, Ohio	1	1																																	
Ohio Works, Youngstown, Ohio	1	6	2	12	2	2	1																												
Mingo Works, Mingo Junction, Ohio	1	4	2		2	1						1																							
Bellaire Works, Bellaire, Ohio	1	2	2		1	1																									1				
Steubenville Works, Steubenville, Ohio	1	1																																	
Upper Union Works, Youngstown, Ohio	1												7																						
Lower Union Works, Youngstown, Ohio	1												5																						
Cleveland Warehouse, Cleveland, Ohio	1																																	1	
Waverly Warehouse, Waverly, N. J	1																																	1	
Total Carnegie Steel Co	29	51	16	115	19	8	4	4	5	7		1	46												2			2	2		3			3	5
AMERICAN STEEL & WIRE CO.																																			
Waukegan Works, Waukegan, Ill	1									3						1	1	1	1						1	1					1		1	
De Kalb (N. & S.) Works, De Kalb, Ill	1																	1															1	
De Kalb (E. & W.) Works, De Kalb, Ill	1															1	1	1							1						1		1	
Rockdale Works, Joliet, Ill	1															1	1	1							1						1		1	
Scott Street Works, Joliet, Ill	1															1	1	1							1						1		1	
Anderson Works, Anderson, Ind	1									1						1	1	1							1								1	
Anthony Works, Tecumseh, Mich	1																	1															1	
American Works, Cleveland, Ohio	1									2						1									1	1			1				1	
Consolidated Works, Cleveland, Ohio	1									1						1	1	1							1								1	
H. P. Works, Cleveland, Ohio	1									1						1	1								1								1	
Cuyahoga Works, Cleveland, Ohio	1									1						1													1				1	

Newburgh Works, Cleveland, Ohio	1		2	6	2						1						1									1	1			1	1	1		1	(2)
Emma Furnace, Cleveland, Ohio	1	1																																	
Central Furnaces, Cleveland, Ohio	1	4																																	
Salem Works, Salem, Ohio	1																1	1																1	
Neville Furnace,[3] Neville Island, Pa	1	1																																	
Allegheny Furnace,[3] Pittsburgh, Pa	1	1																																	
Shoenberger Works, Pittsburgh, Pa	1	2	2	3	2				1				[4] 5		2																1			1	(5)
Rankin Works, Rankin, Pa	1										1						1	1	1							1								1	
Braddock Works, Braddock, Pa	1										1						1																	1	
Allentown Works, Allentown, Pa	1										1						1	1	1							1								1	
North Works, Worcester, Mass	1																1	1								1	1			1		1		1	
Central Works, Worcester, Mass	1																1									1	1							1	
South Works, Worcester, Mass	1			[6] 8	1						3		1				1		1		2					1	1				1	1		1	
New Haven Works, New Haven, Conn	1										1						1	1			1					1	1							1	
Trenton Works, Trenton, N. J	1																1				1						1			1				1	
Troy Works, Breaker Island, N. Y	1	3																																	
Hamilton Works, Hamilton, Ontario	1																		1															1	
Pacific Works, San Francisco, Cal	1																		1	1	1													[7] 1	
Seattle Warehouse, Seattle, Wash	1																																	[7] 1	
St. Louis Warehouse, St. Louis, Mo	1																																	1	
Louisville Warehouse, Louisville, Ky	1																																	1	
Cherryvale Works, Cherryvale, Kans	1																																		(8)
Carondelet Works, Corondelet, Mo	1																																		(9)
Total American Steel & Wire Co	34	12	4	17	5				1		17		6		2		19	12	13	3	5					15	8			5	3	7		27	4
ILLINOIS STEEL CO.																																			
North Works, Chicago, Ill	1																								1									1	(10)
Union Works, Chicago, Ill	1	2																																	
South Works, South Chicago, Ill	1	11	3	[11] 25	3		2	1	2	2																					1				
Joliet Works, Joliet, Ill	1	4	3		2	1					2		3															1	1		1				
Milwaukee Works, Milwaukee, Wis	1	2											6																						
Total Illinois Steel Co	5	19	6	25	5	1	2	1	2	2	2		9												1			1	1		2			1	1
INDIANA STEEL CO.																																			
Gary Works, Gary, Ind	1	8		42	2	2	1	1					5																		1				(12)
ILLINOIS STEEL WAREHOUSE CO.																																			
St. Louis Warehouse, St. Louis, Mo	1																																	1	

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[1] 1 frog and switch works.

[2] 1 shafting department.

[3] Operated by Carnegie Steel Co.

[4] These mills roll bars and blanks for horseshoes.

[5] 1 horseshoe department.

[6] Includes 1 electric steel furnace.

[7] Operated by United States Steel Products Co , Pacific coast department.

[8] Zinc smelter, 2,000 retorts.

[9] Zinc smelter, 4,800 retorts.

[10] 1 paint factory.

[11] Includes 1 electric steel furnace.

[12] 1 axle works.

Summary of manufacturing plants owned by subsidiary companies of United States Steel Corporation Dec. 31, 1911—Continued.

Operating company and name and location of works.	Number of works.	Blast furnaces.	Steel works.		Rolling mills.												Wire mills.					Pipe and tube works.		Tin plate mills.	Bridge and structural plants.	Galv. and tinning depts.		Splice bar and rail joint shops.	Spike, bolt, or nut factories.	Departments for cold-rolled products.	Iron, steel, or brass foundries.	Sulphate of iron plants.	Cement plants.	Warehouses.	Miscellaneous departments. (See footnotes.)
			Bessemer converters.	Open hearth furnaces.	Blooming, large billet, and slabbing mills.	Small billet and sheet bar mills.	Rail mills.	Universal plate mills.	Sheared plate mills.	Structural shape mills.	Wire rod mills.	Skelp mills.	Merchant mills.	Hot mills–black plate for tinning.	Sheet, jobbing, and plate mills.	Piercing and rolling mills for seamless tubing.	Wire drawing mills.	Nail mills.	Barbed and woven fence department.	Spring works.	Rope and electrical works.	Welding pipe furnaces.	Seamless tube mills.			Galvanizing departments.	Tinning departments.								
THE LORAIN STEEL CO.																																			
Johnstown Works, Johnstown, Pa	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	(1)
UNION STEEL CO.																																			
Sharon Works, South Sharon, Pa	1	3	...	12	1	1	...	1	...	...	2	...	...	20	5	...	1	1	1	...	...	...	...	1	...	1	...	...	...	...	...	1	...	3	...
Donora Works, Donora, Pa	1	2	...	12	1	...	...	...	...	...	2	...	...	...	...	...	1	1	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...
Total Union Steel Co	2	5	...	24	2	1	...	1	...	...	4	...	...	20	5	...	2	2	2	...	...	...	...	1	...	2	...	...	...	...	...	2	..	4	...
CLAIRTON STEEL CO.																																			
Clairton Works, Clairton, Pa	1	3	...	12	2	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
UNITED STATES STEEL PRODUCTS CO. (PACIFIC COAST DEPARTMENT).																																			
Twentieth Street Dock Warehouse, San Francisco, Cal	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
AMERICAN SHEET & TIN PLATE CO.																																			
Gary Works, Gary, Ind	1	...	...	...	...	...	...	...	...	...	...	...	...	...	22	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
American Works, Elwood, Ind	1	...	...	...	...	...	...	...	...	...	...	...	...	28	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	...
Morewood Works, Gas City, Ind	1	...	...	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...

Midland Works, Muncie, Ind.	1														7																			1	
Piqua Works, Piqua, Ohio	1					1									4																			1	(1)
Dresden Works, Dresden, Ohio	1														4																			1	
Guernsey Works, Cambridge, Ohio	1														11											1								1	
Cambridge Works, Cambridge, Ohio	1													7																				1	
Crescent Works, Cleveland, Ohio	1													6										1										1	
New Philadelphia Works, New Philadelphia, Ohio	1														12																			1	
Dover Works, Canal Dover, Ohio	1														11											1								1	
Canton Foundry, Canton, Ohio	1																														1				
Struthers Works, Struthers, Ohio	1														6																			1	
Wellsville Works, Wellsville, Ohio	1														10																			1	
Aetna Standard Works, Bridgeport, Ohio	1														11											1								1	
Laughlin Works, Martins Ferry, Ohio	1													23										1										1	
La Belle Works, Wheeling, W. Va.	1													10										1										1	
Chester Works, Chester, W. Va.	1													7										1										1	
Sabraton Works, Morgantown, W. Va.	1													10										1										1	
New Castle Works, New Castle, Pa.	1													20										1										1	
Shenango Works, New Castle, Pa.	1													30										1										1	
Monongahela Works, Pittsburgh, Pa.	1													8										1										1	
United States Works, Demmler, Pa.	1													11										1										1	
Wood Works, McKeesport, Pa.	1					1									13																			1	(2)
Pittsburgh Works, New Kensington, Pa.	1													8										1										1	
Pennsylvania Works, New Kensington, Pa.	1													8										1										1	
National Works, Monessen, Pa.	1													25										1										1	
Humbert Works, South Connellsville, Pa.	1													6										1										1	
Scottdale Works, Scottdale, Pa.	1														9											1								1	
Old Meadow Works, Scottdale, Pa.	1														8																			1	
Saltsburg Works, Saltsburg, Pa.	1														4																			1	
Vandergrift Works, Vandergrift, Pa.	1			10	1	1									37											1								1	(3)
Hyde Park Works, Hyde Park, Pa.	1														6																			1	
Leechburg Works, Leechburg, Pa.	1														11																			1	
Total American Sheet & Tin Plate Co.	34			10	1	3								215	186									15		6					1	1		33	3
AMERICAN BRIDGE CO.																																			
Minneapolis Plant, Minneapolis, Minn.	1																								1						1				
St. Louis Plant, St. Louis, Mo.	1																								1										
American Plant, Chicago, Ill.	1																								1										
Lassig Plant, Chicago, Ill.	1																								1										
Gary Plant, Gary, Ind.	1																								1				1						(4)
Detroit Plant, Detroit, Mich.	1																								1										
Toledo Plant, Toledo, Ohio	1																								1										
Canton Plant, Canton, Ohio	1																								1										
Ambridge Plant, Ambridge, Pa.	1																								1				1		1				(5)
Shiffler Plant, Pittsburgh, Pa.	1																								1	1									(6)

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[1] Three puddling furnaces and one busheling furnace.

[2] Sixteen forge fires.

[3] One sulphuric-acid plant.

[4] One forge department.

[5] One eye-bar works, 1 forge department, and 1 steel-barge yard.

[6] One department for fabricating galvanized towers for power-transmission lines.

Summary of manufacturing plants owned by subsidiary companies of United States Steel Corporation Dec. 31, 1911—Continued.

Operating company and name and location of works.	Number of works.	Steel works.		Rolling mills.												Wire mills.					Pipe and tube works.				Galv. and tinning depts.									
		Blast furnaces.	Bessemer converters.	Open hearth furnaces.	Blooming, large billet, and slabbing mills.	Small billet and sheet bar mills.	Rail mills.	Universal plate mills.	Sheared plate mills.	Structural shape mills.	Wire rod mills.	Skelp mills.	Merchant mills.	Hot mills—black plate for tinning.	Sheet, jobbing, and plate mills.	Piercing and rolling mills for seamless tubing.	Wire drawing mills.	Nail mills.	Barbed and woven fence department.	Spring works.	Rope and electrical works.	Welding pipe furnaces.	Seamless tube mills.	Tin plate mills.	Bridge and structural plants.	Galvanizing departments.	Tinning departments.	Splice bar and rail joint shops.	Spike, bolt, or nut factories.	Departments for cold-rolled products.	Iron, steel, or brass foundries.	Sulphate of iron plants.	Cement plants.	Warehouses.	Miscellaneous departments. (See footnotes.)
AMERICAN BRIDGE CO.—continued.																																		
Pencoyd Plant, Pencoyd, Pa	1			11	1					2			1												1						2				
Edge Moor Plant, Edge Moor, Del	1																								1										
Trenton Plant, Trenton, N. J	1																								1										
Brooklyn Plant, Brooklyn, N. Y	1																								1										
Elmira, North Shop Plant, Elmira Heights, N. Y	1																								1										
Elmira, South Shop Plant, Elmira, N. Y	1																								1										
Total American Bridge Co	16			11	1					2			1												16	1			2		4				5
UNIVERSAL PORTLAND CEMENT CO.																																		
Plant No. 2, South Chicago, Ill	1																																1		
Plant No. 3, Buffington, Ind	1																																1		
Plant No. 4, Buffington, Ind	1																																1		
Plant No. 6, Buffington, Ind	1																																1		
Plant No. 5, Universal (Pittsburgh), Pa	1																																1		
Total Universal Portland Cement Co	[1] 5																																[1] 5		
NATIONAL TUBE CO.																																		
Christy Park Works, McKeesport, Pa	1																						1												
Continental Works, Pittsburgh, Pa	1											3										3													(2)
National Works, McKeesport, Pa	1	4	3		2			1	1			2										18									1				

National (Republic) Works, Pittsburgh, Pa	1											1																							(3)
National (Versailles) Works, Versailles, Pa	1																									1									(4)
Pennsylvania Works, Pittsburgh, Pa	1																					7													(5)
Riverside Works, Benwood, W. Va	1	2	2		1							5										7				1					1				
Syracuse Works, Syarcuse, N. Y	1																					2													
Kewanee Works, Kewanee, Ill	1																					4				1					3				
Total National Tube Co	9	6	5		3			1	1			11										41	1			3					5				4
THE NATIONAL TUBE CO.																																			
Lorain Works, Lorain, Ohio	1	5	2	6	2		1	1	1			3										11				1		1			1	1			
SHELBY STEEL TUBE CO.																																			
Standard A Works, Ellwood City, Pa	1												[6] 3			8							1												
Standard B Works, Ellwood City, Pa	1															2							1												
Total Shelby Steel Tube Co	2												3			10							2												
TENNESSEE COAL, IRON & R. R. CO.																																			
Ensley Works, Ensley, Ala	1	6	[7] 2	8	2		1																								1				
Bessemer Rolling Mill, Bessemer, Ala	1								1				2																						
Bessemer Furnaces, Bessemer, Ala	1	5																																	
Alice Furnace, Birmingham, Ala	1	1																																	
Linn Iron Works, Birmingham, Ala	1																														1				
Oxmoor Furnaces, Oxmoor, Ala	1	2																																	
South Pittsburgh Furnaces, South Pittsburgh, Tenn	1	2																																	
Total Tenness Coal, Iron & R. R. Co	7	16	2	8	2		1		1				2																		2				

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[1] These plants have an aggregate annual output of 12,000,000 barrels of Universal Portland cement.

[2] 32 puddling furnaces.

[3] 44 puddling furnaces, 2 refining fires, and 24 knobbling fires

[4] 1 job works.

[5] 1 thread-protector works.

[6] These mills roll bars and blanks for seamless tubing.

[7] Operated in conjunction with open-hearth duplex process.

IRON-ORE MINES.

Developed iron-ore mines owned by subsidiary companies, December 31, 1911.

IN THE LAKE SUPERIOR ORE REGION.

- Menominee Range:
  - Aragon mine.
  - Chapin mine.
  - Cuff mine.[1]
  - Cundy mine.[1]
  - Hill Top mine.[1]
  - Iron Ridge mine.
  - Mansfield mine.
  - Michigan mine.
  - Pewabic mine (one-half interest).
  - Riverton mine.
- Marquette Range:
  - Champion mine.
  - Lake Superior group (three-fourths interest)—
    - Section 16 mine.
    - Section 21 mine.
    - Hard Ore mine.
    - Hematite mine.
  - Moore mine.[1]
  - Queen mine (three-fourths interest).
  - Stegmiller mine.
  - Winthrop mine.[1]
- Gogebic Range:
  - Atlantic mine.
  - Aurora mine.
  - Chicago mine.[1]
  - Davis mine.
  - Geneva mine.
  - Norrie mine.
  - Plumer mine.
  - Puritan mine.
  - Tilden mine.
- Baraboo Range:
  - Iroquois mine.
- Vermilion Range:
  - Pioneer mine.
  - Savoy mine.
  - Sibley mine.
  - Soudan mine
  - Zenith mine.
- Mesabi Range:
  - Virginia district—
    - Higgins mine.
    - Mountain Iron mine.
    - Sauntry-Alpena mine.
    - Stephens mine.[1]
    - Union mine (one-half interest).
    - Virginia group.
- Mesabi Range—Continued.
  - Adams district—
    - Adams Group.
    - Auburn mine.[1]
    - Spruce mine.
  - Fayal district—
    - Biwabik mine (one-fourth interest).
    - Duluth mine.[1]
    - Fayal mine.
    - Genoa mine.
    - Gilbert mine.
    - McKinley mine.[1]
  - Hibbing district—
    - Burt mine.
    - Dale mine.
    - Day mine.[1]
    - Donora mine.[1]
    - Harold mine.
    - Hull-Rust mine.
    - Mace mine.
    - Mahoning mine (one-fifth interest).
    - Mississippi mine.
    - Morris mine.
    - North Uno mine.
    - Penobscot mine.[1]
    - Sellers mine.
    - South Uno mine.
    - Winifred mine.
  - Chisholm district—
    - Chisholm mine.
    - Clark mine.
    - Glen mine.
    - Hartley mine.[1]
    - Leonard mine.
    - Monroe-Tener mine.
    - Myers mine.
    - Pillsbury mine.[1]
    - St. Clair mine.[1]
    - Sharon mine.[1]
  - Canisteo district—
    - Arcturus mine.[1]
    - Canisteo mine.[2]
    - Hill mine.
    - Holman mine.[3]

IN THE SOUTHERN ORE REGION.

- Red Mountain Range (near Birmingham, Ala.):
  - Muscoda group: 5 active mines.
  - Fossil group: 5 active mines, 1 inactive mine.
  - Ishkooda group: 4 active mines, 1 inactive mine.
  - Green Springs: 1 inactive mine.
- Alabama brown-ore pockets (at Greeley, Ala.):
  - Greeley group: 3 active mines.
  - Champion group: 1 active mine.
- Georgia brown-ore pockets (at Bartow, Ga.):
  - Bartow group: 2 inactive mines.

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[1] Inactive at present time.

Includes Walker pit.

[3] Includes Diamond mine.

In addition to the foregoing mines, the subsidiary companies own in fee or hold under long-term leases in the regions named extensive acreages of mineral and timber lands. These contain large quantities of ore yet unopened and substantial tracts of standing timber held for future use in mining operations.

Coal and coke properties owned by subsidiary companies, Dec. 31, 1911.

Northern coal and coke property.	Acreage of coal property.			Coke plants.			Coal plants not connected with coke plants.
	Coking coal.	Steam coal.	Surface.	Plants.	Bee-hive ovens.	By-product ovens.	
Connellsville region, in Westmoreland and Fayette Counties, Pa.:							
Property owned	70,498		21,912	67	21,796		7
Property leased	1,190						
Pocahontas region, in McDowell and Wyoming Counties, W. Va., and Tazewell County, Va.:							
Property owned			55	7	2,151		5
Property leased	64,660						
Steam coal properties:							
In Washington, Greene, Allegheny, Butler, Lawrence, Mercer, Cambria, and Somerset Counties, Pa.—							
Property owned		22,984	1,042				7
Property leased		3,817					
Sundry small coal tracts located at or near mill plants in Ohio, Pennsylvania, and West Virginia—							
Property owned		3,208	467				6
Property leased		151					
In Illinois and Indiana coal fields: Property owned		63,993	898				[illegible]
By-product coke plants located at blast-furnace plants:							
South Sharon, Pa				1		212	
Benwood, W. Va				1		120	
Joliet, Ill				1		280	
Gary, Ind				1		560	
Total northern coal and coke property	136,348	94,153	24,374	78	23,947	1,172	31

Southern coal and coke property.

(Tennessee Coal, Iron & R. R. Co.)

	Acres.
Acreage of coal territory, viz:	
Mineral interests and surface, owned	184,463
Mineral interests only, owned	147,676
Surface only, owned	10,990

There are located on developed sections of the above property 6 coal-mining plants operating 23 mines, producing coal both for sale and for manufacture into coke. In connection with these coal-mining operations there are 10 coal-washing plants and 7 coking plants, the latter comprising a total of 2,974 bee-hive coke ovens. There is under construction 1 by-product coke plant to consist of 280 ovens, of which 140 ovens were completed at January 1, 1912.

MISCELLANEOUS PROPERTIES OWNED BY SUBSIDIARY COMPANIES, DECEMBER 31, 1911.

WATER-SUPPLY PLANTS.

There are located in the Connellsville coke region various water-supply plants, consisting of 12 reservoirs and 6 pumping stations, with a distributing system of pipe lines aggregating about 90 miles in length. These plants have a daily capacity of 18,000,000 gallons, furnishing water for use in manufacturing coke and, in addition, providing the water supply for 3 municipalities.

NATURAL-GAS PROPERTY.

The Carnegie Natural Gas Co. has in Pennsylvania and West Virginia extensive natural-gas territory, either owning or having under lease about 188,829 acres and owning 629 miles of pipe lines, 6 pumping stations, and 426 active wells.

Extensive natural-gas territory and pipe lines are controlled and owned by the American Sheet & Tin Plate Co. in Pennsylvania and by the National Tube Co. in Ohio. The former company has under lease about 32,368 acres of gas territory, and owns 1 large and 4 smaller pumping stations and 161 active wells. The National Tube Co. has under lease about 10,823 acres of gas territory and 5 developed wells.

ORE DOCKS.

Ore-forwarding docks at Lake Superior ports.

Owned by—	Located at—	Docks.	Pockets.	Storage capacity.	Aggregate tonnage handled over docks in 1911.
				Gross tons.	*Gross tons.*
Duluth & Iron Range R. R. Co.	Two Harbors, Minn.	[1] 6	1,070	247,763	6,389,069
Duluth, Missabe & Northern Ry. Co.	Duluth, Minn.	[illegible]	1,152	269,034	6,934,269

[1] Two of these docks are of steel superstructure on concrete foundations; the spouts of one are operated by electrical power hoists.

Ore-receiving docks at Lake Michigan and Lake Erie ports.

Owned by—	Location.
Illinois Steel Co	South Chicago, Ill.
Illinois Steel Co	Milwaukee, Wis.
Indiana Steel Co	Gary, Ind.
The National Tube Co	Lorain, Ohio.
American Steel & Wire Co	Cleveland, Ohio.
Pittsburgh & Conneaut Dock Co	Conneaut, Ohio.
Pittsburgh & Conneaut Dock Co	Ashtabula, Ohio.
Pennsylvania & Lake Erie Dock Co	Fairport, Ohio.

The foregoing docks for receiving ore are equipped with extensive unloading machinery and apparatus of various types, ore bridges, power plants, etc., for use in unloading ore from vessels, handling ore in connection with blast-furnace operations, and loading ore into cars for reshipment to interior furnace plants. Shipments of large tonnages of coal, finished steel products, etc., are also forwarded over several of these docks.

Standard-gauge railroad equipment owned by subsidiary companies Dec. 31, 1911.

	Duluth & Iron Range R. R.	Duluth, Missabe & Northern Ry.	Elgin, Joliet & Eastern Ry.	Chicago, Lake Shore & Eastern Ry.[1]	Union R. R.	Bessemer & Lake Erie R. R.	Birmingham Southern R. R.	All other railroads.	Iron mining companies.	Steel, coal, and coke companies.	Total.
Steam locomotives	104	110	85	163	118	169	39	119	181	105	1,193
Passenger-train cars:											
Passenger	15	17	1			44	6	5		1	89
Passenger, baggage, mail	4	3	2		8	[illegible]					25
Baggage, mail, and express	4	8				11					23
Observation café	3	3								2	8
Business	2	2	1			2	3		2	6	18
Freight-train cars:											
Box, wood	165	221	330	272		178	27	25		27	1,245
Box, steel underframe				399	694		31				1,124
Caboose	70	58	46	62	5	92		4		8	345
Coke							65			11	76
Coke, steel				968						2	970

[1] Leased by Elgin, Joliet & Eastern Ry. Co.

Standard-guage railroad equipment owned by subsidiary companies Dec. 31, 1911—Con.

	Duluth & Iron Range R. R.	Duluth, Missabe & Northern Ry.	Elgin, Joliet & Eastern Ry.	Chicago, Lake Shore & Eastern Ry.	Union R. R.	Bessemer & Lake Erie R. R.	Birmingham Southern R. R.	All other railroads.	Iron mining companies.	Steel, coal, and coke companies.	Total.
Freight-train cars—Continued.											
Dump, commercial, wood			93	113						4	210
Dump, commercial, steel			100	3,422	598						4,120
Dump, commercial, steel underframe				20							20
Fence (Ellwood)										4	4
Flat, wood	462	566	41	131	21	263	128	83	32	168	1,895
Flat, steel				28			77	186		84	375
Flat, steel underframe				300							300
Gondola, wood	15		1,200	4		473	52	249		223	2,216
Gondola, steel	45		50	375	3,496	3,999	61	529		92	8,647
Gondola, hopper, steel				122	599	4,396	433	519		54	6,123
Gondola, hopper, wood							50			6	56
Gondola, long, steel underframe			800	2,898						1	3,699
Logging	420										420
Ore, wood	249	1,281		35							1,565
Ore, steel	4,322	5,456								4	9,782
Rack										24	24
Refrigerator	22	75									97
Stock	2	4				17					23
Work equipment:											
Ballast	2	59			1	3				3	68
Boarding	27	25	65	47		7	10				181
Cinder, ditching, dump, and grading	4	8	21						2,048	96	2,177
Dirt spreader		3								1	4
Tank and water	8	2	5	2	1	2		4		5	29
Pile drivers	1	1	1			2					5
Scale test			1	2		1	2	2		18	26
Snow plows	4		2								6
Steam shovels	2	2			2	3			131	16	156
Steam wrecking derricks		2	1	1			1		11	2	18
Wrecking and derrick	6	5	1		5	12				1	30
Tool and supply	24	8	15	6	1		1	1			56
Other road cars	7		3	1		2	65	1			79
Total	5,885	7,809	2,779	9,208	5,431	9,515	1,012	1,608	2,224	863	46,334

Marine equipment owned by subsidiary companies Dec. 31, 1911.

	On Great Lakes.	On Ohio River.
Steamers	81	2
Barges, steel	22	30
Barges, wood		69
Tugboats	2	
Scow	1	

Also two ocean-going steamers.

Summary of standard-gauge railroad mileage operated by subsidiary companies Dec. 31, 1911.

Owned or operated by—	Line owned.	Branches and spurs.	Operated under trackage rights.	Second tracks.	Sidings.
Duluth & Iron Range R. R.:					
Duluth to Ely, Minn	117.22		0.80		
Tower Junction to Tower, Minn	1.40				
Allen Junction to Virginia, Minn	25.31				
Spur to town of Gilbert, Minn	.49				
McKinley to Eveleth, Minn	9.02				
Waldo to mile 49 of main line to Ely, Minn	15.02				

Summary of standard-gauge railroad mileage operated by subsidiary companies Dec. 31, 1911—Continued.

Owned or operated by—	Line owned.	Branches and spurs.	Operated under trackage rights.	Second tracks.	Sidings.
Duluth & Iron Range R. R.—Continued.					
Mesaba to Dunka River, Minn	18.29				
Branch from Ridge, Minn	6.29				
Branch from Scott Junction, Minn	7.44				
Two Harbors to Allen Junction, Minn				47.90	
Allen Junction to McKinley, Minn				18.10	
McKinley to Fayal Yard, Minn				4.08	
Yard tracks and sidings					174.13
Branches and spurs to mines, etc		72.17			
Total Duluth & Iron Range R. R	200.48	72.17	.80	70.08	174.13
Duluth, Missabe & Northern Ry.:					
Stony Brook to Mountain Iron Mine, Minn	48.62		1.90		
Missabe Junction to Columbia Junction, Minn	29.34				
Iron Junction to Biwabik, Minn	15.45				
Wolf to Hibbing, Minn	17.26				
Wolf to Virginia, Minn	6.30				
Alborn to Coleraine, Minn	53.00				
Hull Junction to Hull-Rust Yard, Minn	18.15				
Main line branches	35.92				
Ore dock to Wolf, Minn				65.02	
Sherwood to Hull Mine, Minn				52.88	
Wolf, Minn., westward				.20	
Yard tracks and sidings					144.69
Branches and spurs to mines, etc		116.96			32.41
Total Duluth, Missabe & Northern Ry	224.04	116.96	1.90	118.10	177.10
Elgin, Joliet & Eastern Ry.:					
Waukegan, Ill., to Porter, Ind	129.94				
Walker, Ill., to South Wilmington, Ill	33.30				
Normantown, Ill., to Aurora, Ill	9.65				
Hammond, Ind., to Whiting, Ind	7.08				
Griffith, Ind., to Cavanaugh, Ind	7.05				
Rockdale Junction, Ill., to Rockdale, Ill	6.57				
Cavanaugh, Ind., to Shearson, Ind	2.64				
East Joliet, Ill., to Griffith, Ind				36.46	
Griffith, Ind., to Ivanhoe, Ind				4.62	
Ingalton, Ill., to West Chicago, Ill				2.03	
Cavanaugh, Ind., to High Line Connection, Ind				.56	
Spurs to coal mines, quarries, etc		33.56			
Yard tracks and sidings owned					147.60
State Line, Ind., to 112th Street, Chicago, Ill. (C. & W. I. R. R.)			4.80		
112th Street to 98th Street, Chicago, Ill. (Belt Ry.)			2.05		
Chicago Heights, Ill., to Rossville Junction, Ill. (C. & E. I. R. R.)			80.00		
Rossville Junction, Ill., to Burnett Yard, Ind. (C. & E. I. R. R.)			68.50		
Danville, Ill., to Sidell Junction, Ill. (C. & E. I. R. R.)			22.20		
Sidell Junction, Ill., to Rossville Junction, Ill. (C. & E. I. R. R.)			34.40		
Whiting, Ind., to B. & O. Junction, Ill. (B. & O. R. R.)			6.26		
Rock Island Junction, Ill., to Beverly Junction, Ill. (C., R. I. & P. Ry.)			6.25		
48th Street, Chicago, Ill., to Bridgeport, Ill. (C. Jct. Ry.)			4.90		
Whiting, Ind., to McCook, Ill. (C. Jct. Ry.)			28.00		
B. & O. Junction to 48th Street, Chicago, Ill. (C. T. T. R. R.)			3.40		
Buffington, Ind., to Gary & Western Junction, Ind. (C. I. & S. Ry.)			7.53		
Westville, Ill., to Little Vermilion Mine, Ill. (C., C., C. & St. L. Ry.)			2.57		
Total Elgin, Joliet & Eastern Ry	196.23	33.56	270.86	43.67	147.60
Chicago, Lake Shore & Eastern Ry. (leased to and operated by E., J. & E. Ry. Co.):					
South Chicago, Ill., to Kirk Yard, Ind	10.77			11.92	
Cavanaugh, Ind., to Kirk Yard Junction, Ind	4.20			4.15	
South Chicago, Ill., and vicinity		108.92			
Gary, Ind., and vicinity		282.45			
Chicago & Southeastern Ry., at Bridgeport, Ill		8.64			
Chicago & Kenosha Ry., at North Chicago, Ill		4.24			

Summary of standard-gauge railroad mileage operated by subsidiary companies Dec. 31, 1911—Continued.

Owned or operated by—	Line owned.	Branches and spurs.	Operated under trackage rights.	Second tracks.	Sidings.
Chicago, Lake Shore & Western Ry.—Continued.					
Joliet & Blue Island Ry., at Joliet, Ill		42.43			
Milwaukee, Bay View & Chicago R. R., at Milwaukee, Wis		19.43			
Total Chicago, Lake Shore & Eastern Ry	14.97	466.11		16.07	
Bessemer & Lake Erie R. R.:					
Bessemer to North Bessemer, Pa. (leased to Union R. R. Co.)	8.04			8.04	55.86
North Bessemer, Pa., to Conneaut Harbor, Ohio	144.26				
Conneaut Junction to Wallace Junction, Pa	8.71				
Wallace Junction to Cascade, Pa. (N. Y., C. & St. L. R. R.)			12.20		
Cascade to Erie, Pa	2.16				
Kremis to Osgood, Pa	8.87	.32			1.96
Branchton to Hilliard, Pa	10.30				
Goff-Kirby Junction to Goff, Pa	1.48				
Allegheny Junction to Argentine, Pa	1.80				
Main Line branches	.80	28.89		129.96	149.12
Meadville to Linesville, Pa. (M., C. L. & L. R. R.)	20.54				
Lynches Junction to Exposition Pk., Pa. (M., C. L. & L. R. R.)	.92				
Pittsburgh Junction to Butler, Pa. (B. & O. R. R.)			.50		
Total, Bessemer & Lake Erie R. R	207.88	29.21	12.70	138.00	206.94
Birmingham Southern R. R.:					
Birmingham to Brynton, Ala	9.70				
Stockton Junction to Stockton, Ala	4.31				
Village Creek Junction to Sharon Hill, Ala	3.89				
Ensley to Bessemer, Ala	11.08		2.03		
Main Line branches	16.63		23.15		69.27
Total, Birmingham Southern R. R	45.61		25.18		69.27
Union Railroad:					
E. Pittsburgh to Streets Run, Pa., and Duquesne Junction to Duquesne, Pa	8.79	6.09	1.00	9.59	53.27
Junction near Port Perry Bridge to Mifflin Summit (Wabash, Conn.)	7.40			7.40	25.69
Total Union R. R	16.19	6.09	1.00	16.99	78.96
Pittsburgh & Ohio Valley Ry. at Allegheny Furnace, Pittsburgh, and at Neville Island, Pa	2.23		1.18		9.37
Northern Liberties Ry. at Pittsburgh, Pa	.20				1.30
Etna & Montrose R. R., Etna to Pine Creek, Pa	2.00		6.60		.52
St. Clair Terminal R. R., at Clairton, Pa	1.70	6.15	15.43		.55
Donora Southern R. R., at Donora, Pa	4.38				.90
McKeesport Connecting R. R., McKeesport to Port Perry, Pa	5.46		7.69		7.18
McKeesport Terminal R. R., at McKeesport, Pa	.43				.13
Connellsville & Monongahela Ry., Moser Run Junction to Brownsville, Pa. (leased to Pa. R. R. Co.)	15.68	5.22			
Youghiogheny Northern Ry., Broad Ford to Summit, Pa. (leased to P. & L. E. Ry. Co.)	1.88				.16
Johnstown & Stonycreek R. R., at Johnstown, Pa	1.03				
Benwood & Wheeling Conn. Ry., at Riverside, W. Va			12.39		
Mercer Valley R. R., at South Sharon, Pa	3.00				30.00
Newburgh & South Shore Ry., at Newburgh and Cleveland, Ohio	13.14				42.03
Lake Terminal R. R., Lorain steel plant and other industries at Lorain, Ohio, to connections with trunk lines	10.39		29.65		22.08
Elwood, Anderson & Lapelle R. R., Elwood, Ind., to connections with L. E. & W., and P., C., C. & St. L. Rys	1.11				2.94
Waukegan & Mississippi Valley Ry., between E., J. & E., and C. & N. W. Rys., at Waukegan, Ill	2.50				5.50
Pencoyd & Philadelphia R. R., between Penna. R. R. and P. & R. Ry. at Pencoyd, Pa	1.15	2.00			
Interstate Transfer Ry. and Spirit Lake Transfer Ry. between Duluth, Minn., and West Superior, Wis	6.10			.29	10.56
Total mileage	977.78	737.47	385.38	403.20	987.22

X

No. 60

UNITED STATES STEEL CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

SATURDAY, MARCH 30, 1912

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

UNITED STATES STEEL CORPORATION.

Committee on Investigation
of United States Steel Corporation,
House of Representatives,
Saturday, March 30, 1912.

The committee this day met, Hon. Augustus C. Stanley, chairman, presiding.

Mr. Reed. Mr. Chairman, I have the statement of Mr. Filbert as to the tonnage of ore uncovered and the cost of stripping by the Steel Corporation that the chairman asked Mr. Filbert to submit.

The Chairman. Very well.

Mr. Reed. This is a copy of the statement that was submitted to the chairman previously, and I have added to it a memorandum of the explanation I made at the hearing of March 27 as to the amount of ore that was rendered available by this stripping.

The Chairman. Mr. Stenographer, will you put this in as an exhibit at the close of to-day's hearing?

Mr. Danforth. Suppose it be read.

The Chairman. All right.

Mr. Reed. The first inquiry was as to the tonnage of ore stripped at the time of taking the Hill lease, and Mr. Filbert's answer to that is:

> We have no records or data showing this information.

The second inquiry is the approximate cost of stripping per ton of ore in 1907. His reply is:

> Statistics relating to cost of stripping are kept showing such cost per yard of overburden removed, but not per ton of ore uncovered. For the year 1907 the average cost of stripping per yard of overburden removed was 33.1 cents. The cost per ton of ore uncovered necessarily varies materially on different properties according to the depth of the stripping removed and the tonnage of ore thus uncovered. No data has been recorded showing the ore tonnage uncovered by the 1907 stripping. From general knowledge of the subject, however, it is estimated that the stripping cost in that year was equal to about 14 cents per ton of ore.

Your third inquiry is the total cost of stripping on the Hill lease properties and the tonnage uncovered by same. His reply is:

> To December 31, 1911, there had been expended for stripping as above, $4,406,478.21. To the same date there had been uncovered ore tonnage of approximately 37,865,000 tons.

I have added this note:

> As explained at the conclusion of the hearing of March 27, 1912, not more than 27,000,000 tons of this ore is available by the open-pit method of mining.

Mr. Beall. Do you know how many tons of ore the Steel Corporation ever took out of the Hill property?

Mr. Reed. It is something less than the minimum fixed in the lease.

Mr. BEALL. Yes; I knew that, but I did not know how much.

Mr. REED. But in order to get the minima up to June 1, 1915, when that lease is terminated, it will be necessary to take out about 26,000,000 or 27,000,000 tons, practically just the amount that has been rendered available by this stripping, and if that is taken out it will amount to the sum of the minima—the annual minima up to June 1, 1915.

The CHAIRMAN. By the calculation of the minimum tonnage up to 1915, at the rates named in the contract, you approximately fix the amount of ore obtained from the Hill leases up to 1915?

Mr. REED. I think so; yes, sir. Now, when Mr. Kennedy was on the stand last Wednesday he said he had an impression—although he admitted he was not sure about it—that the rate on export finished steel from Pittsburgh to the seaboard was $1.50, and that if the shipment was sent out by way of the Bessemer his impression was that the Bessemer gets 80 cents and the trunk line 70 cents.

Tht CHAIRMAN. He said he was told that.

Mr. REED. Yes. He admitted that he was not sure of that, but he went on to draw some rather dismal conclusions from that fact, or supposed fact. I sent an inquiry to Mr. Baird, who has been a witness before the committee, asking him just what the rates were, and I got this reply from him last night:

> Our Pittsburgh district points to New York, export iron and steel articles—beams, channels, etc.—carloads, rate $2.10 net ton, allow Bessemer and Lake Erie to Erie, Pa., 52 cents; to Wallace Junction, 50 cents; Shenango, 46 cents; and to Butler transfer, 32 cents. Upon export billets and rails, carloads, rate $1.75 gross ton, allows to Erie 43 cents, to Wallace Junction 42 cents, Shenango 39 cents, and to Butler transfer 25 cents gross ton. The bulk of our export tonnage moves via Butler transfer, care Central Jersey delivery.

So that Mr. Kennedy's information on that was clearly quite wrong.

Mr. STERLING. Is the rate less for export?

Mr. REED. The rate is less for export materials, yes; but Bessemer's percentage is almost exactly the same proportion of the rate as its haul is in proportion to the total haul. The telegram is pretty well abbreviated, but I guess it makes sense. I am rather curious to know where Kennedy got that impression, because I can not find that there ever was a rate of that kind in effect; still I feel he must have had some basis for it.

Mr. BEALL. In order that the record may show the matter has not been overlooked, some weeks or months ago the Steel Corporation indicated to the committee that they wanted to put certain experts on the stand on the ore proposition, I do not think they have been used, and Mr. Reed stated to me personally yesterday that they had abandoned the idea of using them. I think the fact ought to be shown in the record. The opportunity is still open to them, if they desire to avail of it.

The CHAIRMAN. Yes, I told Mr. Reed if he had any witnesses on the subject, we would be glad to hear them.

Mr. REED. I understand that the opportunity is still open?

The CHAIRMAN. Well, the probabilities are that the hearings will close. If you have any witness, you should put him on now.

Mr. REED. I should have said that I understood all along that the opportunity has been open.

The CHAIRMAN. Yes. Will you be sworn, Mr. Grasty?

STATEMENT OF JOHN S. GRASTY.

The witness was duly sworn by the chairman.

The CHAIRMAN. Where do you reside, Mr. Grasty?

Mr. GRASTY. In Virginia—Charlottesville, Va.

The CHAIRMAN. What is your business in Charlottesville?

Mr. GRASTY. I am a member of the faculty of the University of Virginia there—department of geology.

The CHAIRMAN. Have you made a special study of ores?

Mr. GRASTY. I have; yes, sir.

The CHAIRMAN. I will ask you, if you have ever taken any special training or course of study in the analysis and valuation to enable you to analyze or value ores, to state what it was.

Mr. GRASTY. You refer to my education?

The CHAIRMAN. Yes.

Mr. GRASTY. Yes; I am a graduate of the Johns Hopkins University, the Massachusetts Institute of Technology, and Washington and Lee University.

The CHAIRMAN. Well, have you ever studied the ore reserves of this country or foreign countries?

Mr. GRASTY. I have; yes, sir.

The CHAIRMAN. What countries?

Mr. GRASTY. England and Germany; a very cursory study, though, in both of those countries.

The CHAIRMAN. Have you ever done any field work, Mr. Grasty?

Mr. GRASTY. Yes, sir.

The CHAIRMAN. Have you ever had any occasion to make any particular investigation of the ore deposits on what is known as the Birmingham district?

Mr. GRASTY. I have, sir.

The CHAIRMAN. How long were you engaged in that investigation?

Mr. GRASTY. Well, about two years in all—a little over two years.

The CHAIRMAN. Well, explain to the committee fully how you happened to make this investigation, for whom you made it, and what was the purpose of it.

Mr. REED. And when it was made?

The CHAIRMAN. Yes; and when it was made.

Mr. GRASTY. The investigation that I undertook in the Birmingham district was begun about four years ago and continued for a period of about two years. The reason for undertaking that particular investigation was that a syndicate in Baltimore had purchased some ore lands in the eastern part of Alabama silicious ore lands, known as the Gray ore deposits, and wanted to buy some Clinton ore or limy ore, so that they might have the ingredients for a furnace proposition. They purchased this Gray ore with the idea and belief that it would be possible to acquire Clinton ores in the Birmingham district proper or somewhere in Alabama, and I was sent down there to see what lands could be had. In order to find out what lands could be had, I investigated what lands were owned by the different furnace companies, because I knew that that would be eliminated from purchase.

The CHAIRMAN. That is, as I understand you, a syndicate——

Mr. GRASTY. Yes; a syndicate.

The CHAIRMAN (continuing). Whose purpose it was to erect blast furnaces and go into the making of pig iron?

Mr. GRASTY. Yes.

The CHAIRMAN. Was this syndicate willing and able to buy large quantities of the Clinton ores if they could be discovered in that region.

Mr. GRASTY. I am sure they were, because I was instructed to get options on them, and they were prepared to buy—they indicated to me that they were—any good properties that could be found.

The CHAIRMAN. Well, I believe you stated you did not secure those options in sufficient quantities?

Mr. GRASTY. No; I was unable to do so.

The CHAIRMAN. Well, did that failure to secure them spring from the fact that you were not willing or not authorized to pay the amounts which the holders of these ores demanded, or because the ore itself was not in existence, or not on the market at all? I wish you would explain that to the committee; what efforts you made to secure these ores.

Mr. GRASTY. As I stated, I first found out what the furnace companies owned. Then I examined the ores—ore lands that were—could possibly be had. I found that these properties were so scattered, and most of it was—most of the ore had to be reached by shaft, and very little outcrop ore could be had; in other words, what I mean to say is this: That while I examined a great many acres—hundreds and hundreds of acres—yet they were in small bodies and scattered, and on that account it did not appear economical to purchase these lands.

The CHAIRMAN. Now, explain that to the committee. We are not technical steel men—why it was that if you could find a patch here and a patch there and a patch yonder, you did not purchase those little patches. What size were these patches and why you did not purchase them?

Mr. GRASTY. Well, as I stated, the ore that reached the surface or outcropped was in small quantity, and generally of inferior quality, and hence would require the operation of a mine on a small scale; say, one small property of 80 acres or 120 acres; then one of the furnace companies would own land in front of that, separating it from another body of ore. In that way such ore land as was available for purchase was practically eliminated from purchase by anyone except the adjoining owners; or if you take the ore lands in Shade Valley, which is east of the Birmingham district, that ore could be had in considerable acreage, but it required shafts from 1,400 to 2,000 feet in depth to reach the ore. That ore also, or that land, rather, was dissected by other ownerships chiefly, in fact—yes, chiefly the furnace companies—as indicated here by this map, which, however, does not show all of the ownerships there; merely the ownerships of three companies.

The CHAIRMAN. As I understand, you found a small body of land, and you would have to sink a shaft to get to that ore 1,200 or 1,400 feet, and into the next body you would have to sink another shaft?

Mr. GRASTY. That is exactly what I mean.

The CHAIRMAN. To what extent could that ore have been mined by one shaft? How far could you go from the foot of a shaft with your entries, if this ore had been available in large tracts?

Mr. **Grasty.** Well, you could go a mile or more easily, because of the gentle dip of the ore at that distance from the outcrop.

The **Chairman.** Now, in among these Superior ore lands there are a number of ore companies that make a business of mining, marketing, leasing from the fee holder and mining this ore and shipping it out. Are there any merchant companies engaged in leasing and the sale of ore as a merchantable commodity in the Birmingham district or in that southern region?

Mr. **Grasty.** There are one or two small companies; one or two small companies.

The **Chairman.** Do they produce sufficient ore to justify a large blast furnace in operating?

Mr. **Grasty.** No.

Mr. **Gardiner.** There are some large ones like the Sloss-Sheffield Co., that produce only pig iron, are there not?

Mr. **Grasty.** Yes.

The **Chairman.** I was asking about another thing; about the merchant companies that produce only ore and do not sell iron at all.

Mr. **Gardiner.** I understood the chairman's question.

The **Chairman.** Now, I will ask you to state to the committee the extent, as near as you can give it, of what is known as the Birmingham district. What are its natural bounds?

Mr. **Grasty.** The Birmingham district has Birmingham as an approximate center; not as the center of a circle. It extends northeastward from Birmingham to a point on this map here about Springville.

Mr. **Beall.** How many miles?

Mr. **Grasty.** I can not tell you. I forget the distance. There to Springville and then southwestward.

The **Chairman.** Is that map to a scale of miles?

Mr. **Grasty.** Yes. Each one of these squares is a township 6 miles square; and that is a scale of one half a mile to the inch.

Mr. **Young.** Well, that is 20 or 25 miles.

Mr. **Grasty.** About 25 miles; yes.

Mr. **Gardner.** It is 3 miles; the length of your rule. You said half a mile to the inch.

Mr. **Grasty.** I meant a mile to the half inch.

Mr. **Gardner.** Oh.

Mr. **Grasty.** That would make it about 25 miles up there. Then, about the same distance—not quite as far, but about the same distance—to below Woodstock in the vicinity of Dudley.

Mr. **Young.** It is about 50 miles long?

Mr. **Grasty.** Yes; about 50 miles long. And it extends up here into Murphys Valley, which is separated from the extension of the Jones Valley, which ends up here at Chalkville, but you may consider it—this Blount Mountain lies here in a basin and is a coal field with ore dipping under it on both sides. The Murphys Valley area has very little value as a source of ore supply. Probably the only portion of this region which makes a great showing on the geological map that is at all workable is several miles in the vicinity of Compton, where the ore is thin. On the east side of Murphys Valley the ore is faulty—here and there little patches of available ore. Up near Springville there is some ore 3 feet thick. It extends up here a short distance and then from there to Attalla, where the mines of the Alabama Consolidated, or one of them, is located. There is a barren stretch [indicating]. The Clinton formation is there, but no ore.

The CHAIRMAN. Are those Alabama consolidated furnaces in operation now?

Mr. GRASTY. I don't know whether they are or not. Then, from Springville down to Trussville is another area in which you have a wide extent of the Clinton formation, which carries these ores, but very little ore that is or any value. As you approach—get within half of the distance between Trussville and Irondale, a distance of about 8 miles—the ore begins to get good and continues to get better southwestward all the way down to Sparks Gap, which is below Bessemer. This is the very heart of the Birmingham district. In here you have at Irondale, which is located at the gap—Red Gap, where most of the railroads—where all the railroads from the north, except this railroad up Murphys Valley enter Jones Valley. On the west side of the Birmingham Valley, which includes two valleys, Jones Valley and Opossum Valley, Opossum Valley continuing up here into Murphys Valley, the formation is faulty and very little ore in there; in fact, it is negligible. Consequently, you can omit from consideration of the distribution of ore supply practically everything with the exceptions I have noted outside of the Red Mountain proper, a distance extending about 30 miles. In there you have three ore beds which are not continuous all that distance. You have four seams rather—an upper seam known as the Hickory Nut seam; then the Ida seam, which is 3 to 6 feet; then the Big seam, which ranges from 15 to 30 feet; then the Irondale, which ranges from 4 to 5 feet. The Irondale and the Big seam continue from the vicinity of Irondale—for about 5 miles southwestward. Then the Big seam continues all the way, but the Irondale plays out. And it is in this district here, from Birmingham to Bessemer and below Bessemer, that you have the main ore supply of the Birmingham district. It is in there—this Big seam [indicating].

The CHAIRMAN. Are there iron and steel plants located there—furnaces?

Mr. GRASTY. Well, furnaces are located here—in Birmingham and Bessemer. There is a furnace up here at Truesville, too, which is owned by the Southern steel.

The CHAIRMAN. You spoke of that district running northeast and southwest being about 30 miles long. What is the width of it?

Mr. GRASTY. The width of the——

The CHAIRMAN. The ore deposit—I am speaking of iron ore.

Mr. GRASTY. Well, those ores dip eastward—dip in this direction [indicating], and extend from Red Mountain under the Cahaba coal field, but they thin somewhat in that direction and consequently the tonnage probably ought not to be calculated much beyond—available tonnages much beyond Shades Creek, which is about three quarters—follows a line a distance of three-quarters the width of the valley between Red Mountain and Shades Mountain.

Mr. YOUNG. Where is Shades Mountain on the map?

Mr. GRASTY. Shades Mountain is here [indicating]. This line. Red Mountain rises here above Birmingham. Then a valley drained by Shades Creek, and then an abrupt point known as Shades Mountain.

Mr. GARDNER. What is that pink spatter north of the river?

Mr. REED. Mr. Perrin explained that—the Tennessee Coal & Iron coal lands.

Mr. GRASTY. Yes; this is in the coal fields.

Mr. GARDNER. What is that river?

Mr. GRASTY. This is the Locust Fork of the Warrior River. It is the Warrior coal field.

The CHAIRMAN. As I understand you, those ore bodies extend in veins, roughly parallel to one another on the map, from what you have said?

Mr. GRASTY. The veins?

The CHAIRMAN. The ore bodies. Do they lay in—their length is greater than their width a good deal, is it not?

Mr. GRASTY. Yes; their length is greater than their width.

The CHAIRMAN. What is the distance across these bodies?

Mr. GRASTY. Well, the distance——

The CHAIRMAN. The line running——

Mr. GRASTY. You mean down the dip of that formation—down the dip of the bed?

The CHAIRMAN. No; I mean the distance where you find ore to the southwest and to the southeast to where you cease to find ore in the northwest.

Mr. GRASTY. There is a distance there of 45 to 50 miles.

The CHAIRMAN. Have they any arrangement about freights in that circle of 25 miles from Birmingham?

Mr. GRASTY. The freight rate, as I remember it, is 12½ cents.

The CHAIRMAN. Flat?

Mr. GRASTY. Yes.

The CHAIRMAN. Within that circle?

Mr. GRASTY. Yes.

The CHAIRMAN. And after that does the rate get higher?

Mr. GRASTY. Yes; it goes up.

The CHAIRMAN. Well, you started to speak of the fact that you could not secure, for the reasons you have mentioned, any of these Clinton ores. Is it possible to operate a blast furnace in competition with blast furnaces supplied with the Clinton ores, using only the gray or siliceous ore?

Mr. GRASTY. Yes; using that as a combination.

The CHAIRMAN. No; I mean using those alone; could you use those gray or siliceous ores, which you say you could find along and by themselves without any mixtures of limy ore, and produce pig iron competitively with those that have both?

Mr. GRASTY. No; you could not use the gray ores with limestone and make pig iron in competition with other furnaces of the district. Hence, this search was made for Clinton ore.

Mr. GARDNER. What is the Clinton ore?

Mr. GRASTY. Clinton ore is the ore in the Clinton formation, which is the formation in which the Alabama iron ores occur largely.

Mr. YOUNG. You mean as related to this district—the red ores?

Mr. GRASTY. Yes; the red ores.

Mr. GARDNER. It is a new term in this hearing. You mean the red ores?

Mr. GRASTY. Yes; the red ores.

Mr. YOUNG. Not the brown ores?

Mr. GRASTY. No.

Mr. BEALL. As I understand it, the syndicate for which you were making this search had already an abundance of the gray ores?

Mr. GRASTY. Yes; they already had enough of the gray ores, which is a siliceous ore, as is the brown ore.

Mr. BEALL. And you were seeking this red ore for the purpose of that mixture?

Mr. GRASTY. The limey red ore, for the purposes of the mixture.

The CHAIRMAN. Are those gray ores widely distributed throughout that region?

Mr. GRASTY. No; they occur in Talladega County, in two different areas, and within limited areas in each of those two.

The CHAIRMAN. Are there any available ore deposits outside of the Birmingham district in this ore-bearing region, extending through the Appalachians from New York to Georgia and Alabama?

Mr. YOUNG. You mean the Appalachian——

The CHAIRMAN. Yes; this mountainous region—that is available in competition with the Birmingham district.

Mr. GRASTY. Do you include in that northwest Georgia and Tennessee?

The CHAIRMAN. The whole region.

Mr. GRASTY. Well, there are furnaces in Tennessee and in Georgia.

Mr. REED. And in Virginia?

Mr. GRASTY. And Virginia, which have been successful.

The CHAIRMAN. Well, are they being operated now?

Mr. GRASTY. Yes.

The CHAIRMAN. In competition with Birmingham?

Mr. GRASTY. Some of them are.

The CHAIRMAN. Is there any great supply—just explain to me what ore supply there is outside of the Birmingham district that is now available for making pig iron in competition with Birmingham furnaces. What is its extent?

Mr. GRASTY. These same ores, as you know, continue from New York to Alabama.

The CHAIRMAN. That is what I know.

Mr. GRASTY. Yes. Now, I will trace them: Northeastward from Birmingham they pass through northwest Georgia into Tennessee, and continue through Tennessee into Virginia, where they are worked at but one place, and from there are not worked again until New York is reached. In Virginia—coming back the other way—in Virginia the ores used are brown ores, with this one exception, where the Clinton ores happen to be barely thick enough to work. The Oriskany iron ores, so called, and the brown ores continue into West Virginia. Then coming into Tennessee there are a number of furnaces working on the brown ore.

The CHAIRMAN. What is the character of that brown-ore formation? Is it a reliable deposit and can it be worked?

Mr. GRASTY. No; they are very pockety; small deposits.

The CHAIRMAN. For instance, if you drill down until you strike the brown ore, do you know how much you have?

Mr. GRASTY. Not unless you check the property with holes and know the proportion of ore or dirt.

The CHAIRMAN. I have seen the statement that the Birmingham district is only a small per cent of the ore-bearing region—ore-bearing body found in this region from New York to Alabama—and that, for instance, this Steel Corporation had only about 15 or 20 per cent of this entire ore supply, and for that reason its holdings of available ore was inconsequential. Is that correct?

Mr. GRASTY. That is correct, if you make the comparison with all the ores that occur in the Southern States. That is approximate, if you make a comparison with all the ores of whatever grade, just so they be called ores.

The CHAIRMAN. I am speaking now of available ores that can be smelted in competition with the Birmingham ores. Ores that you can take out and put in a blast furnace with coke and limestone and get iron out of them in competition with the ores made by the Sloss-Sheffield and the Woodward and Tennessee Coal & Iron people.

Mr. GRASTY. Well, I should say that in the case of the ores in the Birmingham district as the red ores are bedded, the deposits occur in beds like a bed of sandstone or limestone, and a great many of these other ores, as I have indicated, are brown ores, and estimates are made, which may or may not be correct, whereas the estimates on the Birmingham district are very closely correct; that it is very largely a guess, largely a more or less accurate guess, but still a guess.

The CHAIRMAN. What I am trying to get at——

Mr. GARDNER. What is a guess? The 15 per cent?

Mr. GRASTY. Yes; the 15 per cent, because the comparison is made on the basis of all the ores in the South. Now, as I say, a large part of that tonnage is based on estimates of brown-ore deposits, which are pockety; and these brown-ore deposits—the actual tonnage in any given one can not be determined without checker-boarding the property with drill holes, and I don't know of any large property where that has been done systematically. In one or two it has, but included in this estimate my statement holds.

The CHAIRMAN. I understand that there are vast amounts of iron ore of one kind or another scattered all through this mountainous region, from east Tennessee, some little in eastern Kentucky and in Georgia and in Virginia and in New York and in Alabama. You can find it anywhere in there—vast stretches. How much of that ore is so located that you can put up a blast furnace in the midst of it and make iron in competition with the blast furnaces now being operated in the Birmingham district?

Mr. GRASTY. Well, I could not answer that on the basis of per cent. That is a very big question, to state what proportion of it could be operated—what percentage of it in competition with the Birmingham district. I think that it is perfectly erroneous to compare the Tennessee Coal & Iron Co. or the Sloss-Sheffield Steel & Iron Co. or any of the Alabama furnace companies with companies located elsewhere, operating under somewhat different conditions, when the tonnage of one is known and can be known, because of this bedded deposit, and the other is largely a fortuitous estimate. Consequently, I would simply be indulging in the same sort of approximate guessing as was indulged in when this comparison was made.

The CHAIRMAN. Well, outside of the question of these being brown ores and found in pockets, and for that reason you do not know whether you have a hundred tons or a hundred million tons——

Mr. GRASTY. Well, you have probably got nearer the former.

The CHAIRMAN. Yes. Outside of that, what advantage, if any, has the Birmingham district over these districts that you have mentioned that are stretched all the way up and down this range?

Mr. GRASTY. They have an advantage in the cost of manufacture.

The CHAIRMAN. What does that spring from? I want you to explain that.

Mr. GRASTY. A cheaper cost of manufacture because of the proximity of the furnaces, fluxing materials, coal and iron ore, whereas, in the case of some of these other furnaces the ores have to be hauled considerable distances; the limestone has to be hauled considerable distances, and the coke also.

The CHAIRMAN. Now, take a furnace operated at Birmingham or Bessemer, within sight of its ore and coal and limestone, or with its ore, coal, and limestone within such proximity that it can get it at this 12½ cents rate a ton. Can a blast furnace located elsewhere, using ores similar to these in their chemical composition, if not in their metallic content, can a blast furnace elsewhere operate successfully where it has to bring its coal 100 miles or 200 miles, or has to bring its limestone 50 miles?

Mr. GRASTY. Well, in the district that you would make that comparison it is not necessary to bring all of those materials that distance.

The CHAIRMAN. Well, the distance, then, it would be necessary to bring them?

Mr. GRASTY. Well, take the Virginia district—take the Virginia ores. In Virginia the cost is $1 to $2 more a ton to manufacture pig iron than in the Birmingham district.

The CHAIRMAN. Except in an era of great prosperity in the iron business, there is a difference of $2 a ton——

Mr. GRASTY. I think so.

The CHAIRMAN. Sufficient to be prohibitive to the furnace that is handicapped by the amount of difference?

Mr. GRASTY. Well, they are nearer the market.

Mr. GARDNER. The chairman said $2 a ton. I understood you to say $1.

Mr. GRASTY. $2 is nearer correct.

Mr. GARDNER. I wish to call attention to the fact that I understood you to say $1, and the chairman, in asking the question, said $2.

Mr. GRASTY. I understand.

The CHAIRMAN. Go back and read his answer to my first question.

Answer read by the reporter.

Mr. GARDNER. You say now it is nearer $2?

Mr. GRASTY. I want to make that clear, because in the Birmingham district you have a range in price to manufacture pig iron of between $8 and $11.

Mr. GARDNER. That is a range of $3.

Mr. GRASTY. Yes. The lower price runs, let us see, from 8 to 9½ or nearly 10, applies to furnaces immediately in the Birmingham district, and located near Birmingham, and located near Bessemer, but these higher prices refer to ores made up near Gadsden.

Mr. GARDNER. That price is how much?

Mr. GRASTY. About a little over $11.

Mr. GARDNER. And the Virginia price would be from one to two dollars more than that?

Mr. **Grasty**. The Virginia price ranges from eleven to thirteen dollars.

Mr. **Gardner**. From one to two dollars more?

Mr. **Grasty**. Yes.

Mr. **Reed**. Mr. Chairman, the witness was about to say something about the advantage in being closer to the market. Will you let him finish that answer?

Mr. **Grasty**. I was going to say that the Virginia furnaces and the furnaces farther north, while they have a higher cost of production, have that offset to some extent—to a considerable extent in being near the markets where the pig iron is sold and utilized.

Mr. **Gardner**. How much would that difference in the freight rates be, for instance?

Mr. **Grasty**. I am unable to say, exactly.

Mr. **Gardner**. Would it make as much as from one to two dollars difference?

Mr. **Grasty**. I would not like to answer that question without having a knowledge of the exact freight rates.

Mr. **Gardner**. Could you guess?

Mr. **Grasty**. I should say that the advantage in the Birmingham district was in the neighborhood of from one to two dollars.

Mr. **Gardner**. I say, in the question of freight is there a corresponding advantage for the Virginia district amounting to as much as one to two dollars?

Mr. **Grasty**. Well, no; I should not think that.

Mr. **Gardner**. How much would you think they get of an advantage from being nearer to the markets?

Mr. **Grasty**. I would not like to hazard an opinion without some data on that point.

Mr. **Gardner**. You could not guess within 50 cents——

Mr. **Grasty**. I am afraid not.

Mr. **Gardner**. It is rather material to this point under discussion.

Mr. **Grasty**. I know it is.

Mr. **Gardner**. As to whether the Virginia ores are really competitive with Birmingham ores, freight rates considered.

Mr. **Grasty**. That is a very important question, and I wish I could answer it.

Mr. **Reed**. Isn't the rate on foundry iron from Birmingham to Ohio and Pennsylvania points $3.75 a ton?

Mr. **Grasty**. I believe so.

Mr. **Reed**. And from the Virginia furnaces is it not $1.75 a ton?

Mr. **Grasty**. $1.75 a ton. $2.

Mr. **Gardner**. That would make just the difference, so it would bring them in competition?

Mr. **Grasty**. Yes.

Mr. **Gardner**. On even terms with the Birmingham ores?

Mr. **Grasty**. Yes.

The **Chairman**. To what market would that let them in with their pig iron from Virginia?

Mr. **Grasty**. These rates are to the Cincinnati market, are they, Mr. Reed?

Mr. **Reed**. Yes.

Mr. **Grasty**. Yes.

The Chairman. Now, Mr. Grasty, when you were looking about for ores for this syndicate, how is it you did not happen to go up there and get some ores, if they are as desirable as the Birmingham ores?

Mr. Grasty. These people had bought ores in Alabama, and had to have ores—other ores near the ores they had purchased to be mixed and fluxed together.

The Chairman. If the freight rate is as good in Virginia as it is in Alabama, what advantage has Alabama over the Virginia district anyhow?

Mr. Danforth. These fellows had not bought in Virginia.

The Chairman. What advantage has this Alabama district anyway over the Virginia district, if that is true?

Mr. Grasty. Well, it has this advantage, that it has a much larger, much more constant supply of ore, whereas the Virginia deposits are beginning to get rather scarce. There is permanency to the Birmingham district.

The Chairman. Is there any ore in Virginia of any value and extent that is purchasable by anybody?

Mr. Grasty. No; I think not.

The Chairman. What little is there is held by the furnace companies?

Mr. Grasty. Yes.

Mr. Gardner. What percentage of ores in the Birmingham district has the Steel Corporation got?

Mr. Grasty. On the basis of available ores——

Mr. Gardner. You mean commercially available ores?

Mr. Grasty. I mean commercially available ores under present conditions?

Mr. Gardner. Yes; under present conditions.

Mr. Grasty. I should say that the Tennessee Coal & Iron Co. has over 50 per cent.

Mr. Gardner. And that is the only United States Steel Corporation subsidiary that owns any lands down there, I take it; is it not?

Mr. Grasty. Yes; so far as I know.

Mr. Gardner. They own over half of the commercially available ores to-day in the Birmingham district?

Mr. Grasty. Yes.

Mr. Reed. Won't you ask him what he considers commercially available ores?

Mr. Gardner. Well, I will say first what I consider commercially available ores. I mean under present conditions and prices ores that it would pay to convert into pig iron. Now I will have the witness explain his version of it.

Mr. Grasty. That is exactly what I mean. Do you refer to percentages?

Mr. Reed. No; I refer rather to location. Are you simply talking about the outcrop ores?

Mr. Grasty. No; I am referring to the ore which is in the bed and down in the slope.

Mr. Young. You mean the ore that has been developed so that you are certain about it?

Mr. Grasty. Yes; I mean the ore that has been developed.

Mr. Stirling. And by the "Birmingham district" do you mean in the immediate vicinity of Birmingham, or do you include all the Southern ore fields?

Mr. Grasty. No; I refer to the ore on Red Mountain, considering it as far back as to the limit of Shade's Creek.

Mr. Gardner. Taking this map, to that extremity there [indicating] and that extremity there [indicating], and the Warrior River—that does not show in the minutes, of course—from the Warrior River across this span of about 14 inches, what percentage of the ore—the commercial available ore under present conditions—does the Steel Corporation own, in your opinion?

Mr. Stirling. You pointed and said, "From there to there." Let us have that defined in the record.

Mr. Gardner. This is from Altoona on the northeast to Dudley on the southwest, being the longest dimension of the field, and from the Warrior River on the west to Oak Mountain on the east, being the shortest axis of the field—use the words "longest axis" and "shortest axis." Now, in the district so described, what percentage of ores commercially available under the present conditions in your opinion does the United States Steel Corporation own? That is the question that we want, is it not?

The Chairman. Yes.

Mr. Grasty. It owns, calculated to the vicinity of Shades Creek, a little over——

Mr. Gardner. Hold on, you are putting new facts in this problem.

Mr. Grasty. I am obliged to do that, sir.

Mr. Young. Why not embrace Shades Mountain?

Mr. Grasty. Well, if we embrace Shades Mountain, then the percentage owned by the Steel Corporation is larger.

Mr. Gardner. Well, now, why not take the area as I, in my ignorance, described it, and not subspecify at all?

Mr. Young. Take the whole district.

Mr. Gardner. Yes; take the whole district, just as I described it. I took outside limits, so I must include everything shown on that map, at least as far as I can tell.

Mr. Grasty. Then, I would say that the Steel Corporation owns there, instead of a little over 50 per cent, it owns nearer 75 per cent, but I would not include that.

Mr. Gardner. Well, is that all commercially available—that ore?

Mr. Grasty. I do not think they have, on a proper basis of comparison with other companies, more than about 52 or 53 per cent, on that basis of comparison.

Mr. Young. Of available ore?

Mr. Grasty. Yes; actually available, but if you consider ore which is probably available and that which is possibly available, then the Tennessee Coal & Iron Co. figures jump from over 200,000,000 tons up in the second case to approximately 400,000,000, and in the third to approximately 700,000,000 to 800,000,000.

Mr. Gardner. 400,000,000 probably available and 800,000,000 possibly available?

Mr. Grasty. Well, that includes the whole thing.

Mr. Gardner. Yes.

Mr. Young. Let him finish that. About 200,000,000 that you are sure of?

Mr. Grasty. Two hundred millions that there can be no question of.

Mr. Gardner. There are, then, as I understand it, 200,000,000 tons of commercially available ores—conceded to be commercially available at the present date—in the possession of the United States Steel Corporation?

Mr. Grasty. Yes.

Mr. Gardner. There are besides those 200,000,000 tons 200,000,000 more, in your estimation, that are probably commercially available?

Mr. Grasty. Yes.

Mr. Gardner. And in addition to those 400,000,000 tons there are 400,000,000 more which possibly may be commercially available?

Mr. Grasty. Well, what is your total?

Mr. Gardner. Eight hundred, that would make it, altogether.

Mr. Grasty. Yes; I should say that was about right.

Mr. Young. Does that possibility relate merely to the question of availability, or is there a possibility they do not exist?

Mr. Grasty. Oh, no; they exist, and some day will be used.

Mr. Gardner. Now, another question: Applying that same line of probability and possibility to the ores owned by the other companies, like the Woodward Co. and the Sloss Co., the possibilities of the United States Steel Corporation, as I understand you, increase in a greater ratio than the possibilities of those other companies?

Mr. Grasty. They do; yes.

Mr. Gardner. So that if you take in the extremest possibility that seems to you reasonable at the present time, the United States Steel Corporation has 75 per cent of the ores, but of the ores which everyone concedes to be commercially available at the present time they own 50 per cent?

Mr. Young. Fifty-two or fifty-three.

Mr. Gardner. No; he said 52 or 53 reasonably.

Mr. Grasty. I meant 52 or 53 per cent——

Mr. Gardner. Fifty-two or fifty-three per cent of the ores which are conceded to be commercially available to-day in the district that I have described are owned by the United States Steel Corporation, and 75 per cent of the ores which may possibly be commercially available are owned by the United States Steel Corporation?

Mr. Grasty. Yes. I think perhaps it would be much greater than that, for this reason: These other companies do not own ore lands in that direction to the extent that the Tennessee Coal & Iron Co. does.

Mr. Gardner. But I covered in describing the region all the coal holdings of those other Birmingham companies, did I not, in the Birmingham district?

Mr. Grasty. Yes.

Mr. Gardner. Well, I think that is a fair statement of the case, Mr. Witness. I mean to say, if you can suggest any better way to get at the holdings in the Birmingham district than that I——

Mr. Grasty. Well, the only basis—proper basis of comparison, it seems to me at present, is on the basis of available ores. Then, if you are going to look into the future for a long distance, the Tennessee Coal & Iron Co. has enormous advantage over the other companies of that district. It is a question of how far you are going to figure.

Mr. Gardner. Going to what?

Mr. GRASTY. You are going to figure.

Mr. YOUNG. Well, it is a question also, is it not, of how low-grade ores will within any reasonable time become available there commercially?

Mr. GRASTY. That is a question, of course.

Mr. YOUNG. And that depends a good deal upon the developments in other directions.

Mr. GRASTY. It does, yes.

Mr. STERLING. Has that territory all been explored? Is there any possibility of other ores there than that?

Mr. GRASTY. I think not. I do not think that anyone supposes that any more new ore will be found in Alabama.

Mr. GARDNER. Have you ever given any attention to the question of new ores in Newfoundland and Canada?

Mr. GRASTY. No; I have not.

Mr. GARDNER. You mean, in the Birmingham district?

Mr. GRASTY. Yes; in the Birmingham district.

Mr. REED. May I suggest one question, Mr. Chairman?

The CHAIRMAN. Certainly.

Mr. REED. An estimate of the immediately available ores was made by Mr. Burchett for the United States Geological Survey, and he estimated at the present time in the district between Sparks Gap and Morrows Gap, which is approximately the district you have taken——

Mr. GRASTY. Yes.

Mr. REED. There were now available 358,400,000 tons of ore. My information is that that district includes some 14,800 acres.

The CHAIRMAN. That is all in the record now.

Mr. REED. Well, then, if the record corroborates my information, so much the better. And of that acreage, the Tennessee Coal & Iron Co. own 37.5 per cent. The independent furnace companies own 31.7 per cent, and private owners not in the furnace business own 30.8 per cent.

Mr. YOUNG. That is acreage?

Mr. REED. Yes, acreage; and in tonnage the Tennessee Coal & Iron Co. has 131,000,000 the independent furnace companies have 109,000,000, and private owners 117,000,000, so that of the ore which Mr. Burchett considers to be immediately available the Tennessee Coal & Iron Co.'s percentage is 36.8. I would like to know what Mr. Grasty has to say about those figures.

Mr. GRASTY. I think that Mr. Burchett's estimates are very good and accurate estimates, and I want to say this, that in looking at a note here I find that I have included in this estimate of what the Tennessee Coal & Iron Co. own, some tonnage that they own at Compton and some tonnage that they own at Springville.

Mr. REED. And that is outside of this district?

Mr. GRASTY. That is outside of this district, but that includes practically all of the ores of the district, except at Compton on the east side of Murphys Valley—some ore there owned by the Sloss Co., a small tract, and at Springville a small quantity owned by the Sloss Co. There are no other ores in the district except this stretch on the east of Red Mountain, which may not be taken into consideration because the ores are not of a grade that can be used or a thickness that can be worked.

Mr. YOUNG. Are there brown ores owned by the Sloss Co. at Russellville?

Mr. GRASTY. Yes.

Mr. YOUNG. Are they of a higher grade than these red ones?

Mr. GRASTY. Yes; they contain a greater content of iron.

Mr. YOUNG. Those are the finest ore mines in Alabama, are they not?

Mr. GRASTY. I do not know that they are the finest ore mines in Alabama, but they are regarded as being very good indeed.

Mr. YOUNG. How does the ore of the Woodward Co. in this district compare with the ore of the Tennessee Coal & Iron Co. as to quality?

Mr. GRASTY. It is perhaps slightly better.

Mr. YOUNG. Yes.

Mr. GRASTY. Generally regarded as slightly better, but not a great advantage.

Mr. YOUNG. I remember listening to a conversation in the Ways and Means Committee between Mr. Gary and Mr. Underwood, relating to this question, in which Mr. Gary said that, "We do not claim that we can make pig iron as cheap as the Woodward Iron Co. We can not do it." Mr. Underwood seemed to agree to that. Now, what is the advantage that the Woodward Iron Co. has there? Is it in the quality of these ores?

Mr. GRASTY. They have that advantage, which is not a great one, but they have a great advantage in the assembling of ores and fuel, because of the proximity of their ore mines and their coke ovens and coal mines.

Mr. YOUNG. Now, we hear all sorts of claims about this, you know. I have heard the claim made that the Woodward Co. had two or three hundred million tons of ore there. What would you say as to that?

Mr. GRASTY. I would say, making this comparison on the basis I have indicated; that is, including all of the ores, not only owned in East Red Mountain, but in the Birmingham district, which would include but two other places, relatively small, one at Springville and one up near Compton, that the Woodward Iron Co., considering its tonnage on the same basis of availability, and by the way, on this comparison these figures jibe very closely with Mr. Burchett's that the Woodward Co., I should say, have about nearly 81,000,000—80,000,000 to 81,000,000—tons of this first grade ore.

Mr. BEALL. As compared with 200,000,000 of the Steel Corporation?

Mr. GRASTY. About 218,000,000.

Mr. YOUNG. And how much, taking in the probably available?

Mr. GRASTY. Well, they have no such—that pushes their ore very closely.

Mr. YOUNG. I do not mean possibly available, but——

Mr. GRASTY. I know what you mean, but they do not own a great deal of ore land in that district which might be so included. For instance, if I may refer to this map, you will notice that the Tennessee Coal & Iron Co. owns a great acreage in here between Red Mountain and Shades Mountain.

Mr. YOUNG. Yes.

Mr. GRASTY. The Sloss company, for instance, which is represented here in brown, does not extend over—extends less than half the distance in this direction [indicating]. The same is true of the Woodward company, and the same is true of the Republic company, except in one place where the Woodward company has bought land to the northeast of this red area, right here [indicating], so the Tennessee Coal & Iron Co.'s lands, they have probable ore—and probably available ore—which the others do not have.

Mr. YOUNG. Now, how much ore has the Republic Iron & Steel that is at present available and known to exist there?

Mr. GRASTY. In the neighborhood of forty-eight to fifty million—forty-eight million, the Republic Iron & Steel.

Mr. YOUNG. Taking in this second class, which is probably available?

Mr. GRASTY. Well, their lands are shown on this map, too. You will see that they have, from this map—there are no holdings over on Shades Mountain or even halfway across the mountain.

Mr. YOUNG. What is their color?

Mr. GRASTY. Blue. Down here, where they have an extensive area, the ore is thinner and less valuable.

Mr. YOUNG. How much ore has the Sloss-Sheffield, according to your estimate?

Mr. GRASTY. The Sloss-Sheffield has about 54,000,000 tons.

The CHAIRMAN. At this point, Mr. Young, the committee, I think, wants to hold a little executive session, and I thought we had better hold it while we are all here, and if it suits your convenience we will hold this little session now and have Mr. Grasty come back at half past 1. Mr. Grasty, we will excuse you until half past 1.

Whereupon, at 12.05 p. m., on the 30th day of March, 1912, a recess was taken until 1.30 p. m. on the same day.

AFTER RECESS.

The committee resumed its session, at the expiration of recess, at 2 o'clock p. m.

STATEMENT OF JOHN S. GRASTY—Continued.

Mr. YOUNG. What was the amount of ore you fixed for the Woodward?

Mr. GRASTY. I fixed over 80,000,000 tons, between 80 and 81 tons for the Woodward.

Mr. YOUNG. How much for the Sloss-Sheffield?

Mr. GRASTY. Very nearly, in round numbers, 54,000,000.

Mr. YOUNG. How much for the Alabama Consolidated?

Mr. GRASTY. The Alabama Consolidated is not in this particular district.

Mr. YOUNG. They do not own anything in there?

Mr. GRASTY. Yes; they do own some, but I have not included that.

Mr. YOUNG. You have not included that at all?

Mr. GRASTY. No.

Mr. YOUNG. Do you know about how much they own in this district?

Mr. GRASTY. They own what is known as the Hammond mine, but that mine is not in operation at present, because of the character of the ore. For that reason I did not include it.

Mr. YOUNG. Where are the rest of their holdings?

Mr. GRASTY. The rest of the holdings of the Alabama Consolidated are at Attalla.

Mr. YOUNG. How far distant is that?

Mr. GRASTY. I can show it to you on this map without being able to tell you the distance in miles. Here is Attalla, here [indicating].

Mr. YOUNG. That is within the general district.

Mr. GRASTY. Well, that is not within the Birmingham district proper; it is rather within what you would call the Gadsden district.

Mr. YOUNG. It is within the district, is it not, as outlined by Mr. Gardner, which we have been considering?

Mr. GRASTY. I don't know how he outlined the district.

Mr. YOUNG. Well, when he was examining you he got a strip there about 50 miles or more.

Mr. GRASTY. No; that is not included in that. He included the portion of Alabama lying between Springville on the northeast and Dudley on the southwest, which includes Red Mountain.

Mr. YOUNG. Between what, did you say?

Mr. GRASTY. Springville and Dudley.

Mr. YOUNG. That is not 50 miles. The whole length was 50 miles.

Mr. GRASTY. The distance from Birmingham to Attalla is greater than 50 miles. I will measure it off here if you desire to get the distance.

Mr. YOUNG. No; you need not do that. But is that not a part of the same general district?

Mr. GRASTY. I would call it so in a broad way.

Mr. YOUNG. How much ore is there over there in that district, in what you would call Attalla, part of the Birmingham district?

Mr. GRASTY. That portion of the district is small as compared with the rest. The Alabama Consolidated owns one mine at Attalla; another mine near Gadsden, and still another up on what is known as Shinbone Ridge, up on that district. They work two mines, one at Gadsden and one at Attalla. The one in the Birmingham district has not been in operation for some time.

Mr. YOUNG. About what are their entire holdings, then?

Mr. GRASTY. I am unable to tell you. I know their properties, but I forgot their acreage.

Mr. YOUNG. You did not make any examination as to their holdings?

Mr. GRASTY. Yes; I have; but I have not the data here with me.

Mr. YOUNG. You can supply it?

Mr. GRASTY. Yes.

Mr. YOUNG. Will you do so?

Mr. GRASTY. I will be glad to do so.

Mr. YOUNG. How much have the Birmingham Coal & Iron Co.?

Mr. GRASTY. The Birmingham Coal & Iron Co. is to be included with the Woodward, since it has been purchased by the Woodward Co.

Mr. YOUNG. Did you include it in that estimate of 81,000,000 tons?

Mr. GRASTY. I did.

Mr. YOUNG. How much has the Southern Steel?

Mr. GRASTY. The Southern Steel has about the same tonnage as the Alabama Consolidated, and its mines are located in that same district—the Attalla-Gadsden district. They own a mine at Krudup, which is above Attalla, about 10 miles or more, another at Portersville. Then they own some more properties over in Georgia. Their best mine is at Krudup.

Mr. YOUNG. Can you tell about how much they have to make a reasonably fair estimate on it?

Mr. GRASTY. I should say that the Alabama Consolidated and the Southern Steel each have in the neighborhood, of available ore, from fifteen to twenty million tons approximately. I say approximately, because that figure is in my mind, without being checked up. I know that their holdings are relatively small.

Mr. YOUNG. What were the figures you gave there?

Mr. GRASTY. From fifteen to twenty-five million tons.

Mr. YOUNG. Each, or between them?

Mr. GRASTY. Well, between them I should say that they did not own over 30,000,000 tons. I would put it around 30,000,000 tons; I think that would be liberal.

Mr. YOUNG. The Woodward Iron Co. has been by far the most successful and profitable of these properties up to date, has it not?

Mr. GRASTY. I think so.

Mr. YOUNG. And you impute that to the fact it has little better ores and they are much more cheaply assembled?

Mr. GRASTY. Yes, sir.

Mr. YOUNG. That is the ores, the limestone and the coke?

Mr. GRASTY. That is it.

Mr. YOUNG. Cheaper to be assembled than any of the other properties?

Mr. GRASTY. Yes, sir.

Mr. YOUNG. The Woodward Co. is the only company that has ever paid any dividends on all its stock, is it not?

Mr. GRASTY. I do not know as to that.

Mr. YOUNG. The Tennessee Coal & Iron Co. at one time paid some dividends on its preferred stock.

Mr. GRASTY. I know the Woodward is regarded as the most successful company in that district.

Mr. YOUNG. The claim has been made here that the advantages of this situation of the Birmingham are such that that district can defy all competition. If that is so, how do you account for the fact that none of the companies except the Woodward has been able to pay dividends on all their stock, and that several of them have been in the hands of receivers a good share of the time?

Mr. GRASTY. What do you mean by defying competition—where?

Mr. YOUNG. That the advantages were so much greater there was no concern in the South that could successfully compete with this district to any extent.

Mr. GRASTY. You mean the whole South?

Mr. YOUNG. Yes.

Mr. GRASTY. I would not say that, because there have been successful competitors in the whole South. But I would say this district has advantages which offset its distance from the market and put it on a par with a slightly greater advantage with other things of the competing markets of these other companies.

Mr. YOUNG. In the South?

Mr. GRASTY. Yes, sir.

Mr. YOUNG. You mean by that the Birmingham district is so situated, with reference to the material necessary to produce iron, that the natural advantages it has put it on a footing with others; that the freight rate does not interfere with their competing with others who have not these natural advantages?

Mr. GRASTY. In a general way I mean that.

Mr. YOUNG. Have you ever been familiar with the Lake Superior deposits?

Mr. GRASTY. No; I only know their ores from their analysis.

Mr. YOUNG. You have never examined them?

Mr. GRASTY. I have seen their ores, but have never examined them.

Mr. YOUNG. These Birmingham ores lie somewhat as in coal beds, one above the other?

Mr. GRASTY. Yes.

Mr. YOUNG. So they are pretty regular?

Mr. GRASTY. They are stratified deposits, bed deposits. That is to say, they are regular for reasonable distances and sometimes they occur in lenses which soon terminate. The lenses are of variable lengths.

Mr. YOUNG. They fault sometimes?

Mr. GRASTY. They are faulty in various places, but fortunately for the Birmingham district the faulting has occurred in regions where the ore is least valuable.

Mr. YOUNG. How extensive an examination did you make?

Mr. GRASTY. I spent over two years in going over the district in detail in search of ores for this syndicate that I mentioned earlier in the day. But in doing that of necessity I saw everything that was in the district and what the various companies had.

Mr. YOUNG. Did you do anything except examine the surface? Did you sink test pits or do any drilling?

Mr. GRASTY. No, I did not; I only went in the mines.

Mr. YOUNG. The mines that were open?

Mr. GRASTY. Yes, the mines that were open; and a good many of the drill records were available to me.

Mr. YOUNG. Did those companies let you see their drill records, all of them?

Mr. GRASTY. No, not all of them.

Mr. YOUNG. You think that drilling enough has been done there so that they have clearly marked out the boundaries of these ore bodies, or is the geological formation such that you can say that beyond this point there is no use looking for ore; it is absolutely impossible it should be there. Or is there a considerable territory about which there is still doubt?

Mr. GRASTY. Well, the question of whether ore extends under Shade Mountain, the Cahaba coal field, or what distance it goes under there, or in what quantity, and quality, is a matter for future investigation. If it does continue under there it opens up a much larger tonnage than is now in sight.

Mr. YOUNG. So there are a good many unsettled questions there yet as to tonnage, and a good many unsettled questions as to quality?

Mr. GRASTY. Yes.

Mr. YOUNG. Would you think it would be a pretty bold man who said there was just a certain tonnage there, and there could not be any more?

Mr. GRASTY. Yes; I would say that in view of the fact that this region to the east beyond a certain point is not definitely known, or very little is known of it.

Mr. Young. That has been the history of every iron mining district, has it not?

Mr. Grasty. Yes, sir.

Mr. Young. I live in the Marquette district, which is the oldest district in Lake Superior. We have made some of the best discoveries in the last 2 years, although we have been mining there for over 50, where we thought there was not one, were sure there was not.

Mr. Grasty. At the same time, in a district of this kind, in order to discover new tonnages in regions in which they are thought not to exist now, it would be necessary to spend a great deal of money.

Mr. Young. Undoubtedly.

Mr. Grasty. And it is very difficult to get that money spent except by some company which is in need of it, very badly in need of it.

Mr. Young. In many cases I suppose you have to go deep.

Mr. Grasty. Yes; and between these outcrops in Murphys Valley and the outcrops over here [indicating], along the Alabama Great Southern, northeast of Springville, under this coal field, it might be possible if you would put a drill hole there and drill it thoroughly you would find areas are in there that are not thought to be at all valuable now because the outcrop is poor and very lean.

Mr. Young. Has there been much deep drilling in this section?

Mr. Grasty. None at all in that particular section for ores.

Mr. Young. In the whole Birmingham district how deep has the drilling been?

Mr. Grasty. I should say there is no drill hole in the Birmingham district, from the surface to the ore, which has exceeded 2,500 feet. Probably the average is under 2,000 feet; there are very few over that. And so those who would purchase ore, say in Shades Valley, these scattered areas, after they have proved it with the drill, must needs sink a shaft from 1,800—or let me say 1,400 to 2,000 feet, to get the ore, which of course you recognize would be a very costly thing.

Mr. Young. Yes. You would not regard that as at all prohibitive if there was a large body of ore there, would you?

Mr. Grasty. Not if that shaft, which of course is a permanent investment, reached a body of ore large enough.

Mr. Young. Did you make any effort to purchase any of this land or obtain options or leases on it?

Mr. Grasty. Yes.

Mr. Young. If you do not object to telling, what were the prices per ton that you were offering on your estimate of the tonnage?

Mr. Grasty. Well, you mean the prices of the land or expressed in tonnage?

Mr. Young. Expressed in tonnage?

Mr. Grasty. I don't know that I can give you that offhand. I can say that the land in there was valued and held at anywhere from $500 an acre up to $1,000 an acre.

Mr. Young. But that gives us little idea as to what the prices were that your people were willing to give per ton.

Mr. Grasty. Yes.

Mr. Young. And I suppose that if you made any offers it was based on your estimate of the tonnage, was it not?

Mr. Grasty. Yes.

Mr. Young. Can not you tell me about what that estimate was as to the value?

Mr. Grasty. They were willing to purchase at the rate of from 2 to 3 cents a ton, because if they operated that would mean a great deal of dead capital, because they could not get it out all at once.

Mr. Reed. $500 an acre is not as much as 3 cents a ton.

Mr. Grasty. No; that is perfectly true. It is less than that.

Mr. Reed. I beg your pardon, Mr. Young, for interrupting.

Mr. Young. I did not hear the interruption.

Mr. Reed. I suggested that $500 an acre was not as much as 3 cents a ton, and Mr. Grasty seems to agree with it.

Mr. Grasty. I agree with you about that, but I say they would have been willing, if they could have gotten property which was situated properly and there was sufficient tonnage on it, to have paid that much if the ore was a good high grade.

Mr. Young. But they were unable to get it at that price?

Mr. Grasty. Yes. They were not so much unable to get it at that price as they were unable to get the acreage.

Mr. Young. I understand. But I say you did, as I understand you, make some offers on that?

Mr. Grasty. No; I made no offers, because I could not get the acreage. I could not body it up in sufficient acreage to buy.

The Chairman. Could you get a sufficient acreage at any price?

Mr. Grasty. No; I could not.

Mr. Young. You did not offer——

Mr. Grasty (interposing). My efforts consisted in unsuccessful attempts, a series, a great many unsuccessful attempts, to get a sufficient acreage before the question of negotiations of the price ever reached that point.

Mr. Young. But that was the price you were willing to pay, that your people were willing to pay, if they could get the ore—something from 2 to 3 cents?

Mr. Grasty. Yes; because they had what they considered a very valuable property and which they could not possibly vitalize without acquiring ores of this character.

Mr. Young. So they were willing to stretch the price a little in order to get something that would make available ores that they already had?

Mr. Grasty. That is true.

Mr. Young. How long ago is it that you made this investigation?

Mr. Grasty. First about four to five years ago, and then just a year ago I made another attempt for them, a little over a year.

Mr. Young. Four or five years ago; that would bring it back to 1907 or 1908.

Mr. Grasty. Yes; and then nearly two years ago I made another effort which was just as unsuccessful.

Mr. Young. Do you remember whether you were engaged in this work at the time that the United States Steel Corporation acquired its interest in the Tennessee Coal & Iron Co.? Was it during that time?

Mr. Grasty. I was engaged in it—when was that?

Mr. Young. During the fall of 1907.

Mr. Bartlett. November 3, 1907.

Mr. Grasty. Yes; during and prior to it, and then subsequent to it.

Mr. YOUNG. I see. When was it, if you know, that this estimate of Mr. Burchard was made that he set forth in a geological survey bulletin?

Mr. GRASTY. That estimate was made some time prior to the issue of that bulletin. I have it here before me. It was printed in 1910.

Mr. YOUNG. So it was made not far from the time that you made your investigation?

Mr. GRASTY. No.

If the chairman will permit me, I want to make a correction of my testimony in regard to the tonnage of the Tennessee Coal & Iron Co. I found that I added the same figures twice this morning. I said the Tennessee Coal & Iron Co. owned about 200,000,000 tons of available ore. I will put that at 220,000,000 tons of available ore and add 200,000,000 more of probable available ore, so close to available that it should be included with it, I think; which would be 4.2 to 0.6, which would be 70 per cent of the total of the district. I put it that way so that does not include the possible tonnage which is not considered probably available even.

Mr. YOUNG. Now, in accounting for the difference in percentage in your estimate and Mr. Burchard's, you stated that you had taken in two small districts——

Mr. GRASTY. Yes.

Mr. YOUNG (continuing). That he had not.

Mr. GRASTY. Yes.

Mr. YOUNG. They do not account for anywhere near that difference, do they?

Mr. GRASTY. The difference between my estimate and his?

Mr. YOUNG. Yes.

Mr. GRASTY. My estimate and his are in very close accord, because my estimate included these outside districts—say, Compton and Springfield—where I include also some for the Sloss company at both places; but his is about 400,000,000 for the whole of the Birmingham district, the heart of the district.

Mr. YOUNG. But his estimate, as I recollect it, is in the neighborhood of one-third of the total available ore for the Tennessee Coal & Iron Co., something about 130,000,000. I think his figures are all somewhat lower than yours.

Mr. GRASTY. Yes. This morning when that was mentioned I thought you referred to the total estimate, say, of the ores in Red Mountain, or Mr. Reed did, and in Shades Valley, as covered by the various ownerships.

Mr. YOUNG. Well, he makes a division there as between these different companies.

Mr. GRASTY. Yes.

Mr. YOUNG. The same as you have done in your answers to me.

Mr. GRASTY. Yes.

Mr. YOUNG. But you seem to find a much larger proportion of this ore, as I understand it, belonging to the Tennessee Coal & Iron Co. than Mr. Burchard does.

Mr. GRASTY. Yes.

Mr. YOUNG. I wish to know, if you could explain, how that occurs; what the real difference between you and Mr. Burchard is on that.

Mr. GRASTY. I think the real difference is this, that Mr. Burchard draws the line closer to the outcrop than I do. In other words, the

Tennessee Coal & Iron Co. owns a great deal more land to the east of Red Mountain than he has included in his estimate.

Mr. YOUNG. Does that appear in his report?

Mr. GRASTY. Yes; I think it does, because he does not carry his estimate much beyond Shades Creek.

Mr. YOUNG. And you carry it over to the mountain?

Mr. GRASTY. Yes, sir.

Mr. YOUNG. That is all.

The CHAIRMAN. Mr. Young, you spoke something about companies being in the hands of a receiver. I would like to have Mr. Grasty state what he knows about that. Do you know anything about those companies being in the hands of receivers?

Mr. GRASTY. The Southern Steel Co. was in the hands of a receiver.

Mr. CHAIRMAN. That is not one of those large companies there.

Mr. GRASTY. No.

Mr. YOUNG. I have named seven altogether.

Mr. GRASTY. Neither the Sloss nor the Tennessee Coal & Iron Co., nor the Republic, nor the Woodward—no, not one of those.

The CHAIRMAN. What large companies in the Birmingham district have been in the hands of receivers in the last 10 years in that particular district, large companies?

Mr. GRASTY. The Southern Steel & Iron Co. is the only one I recall.

The CHAIRMAN. How does it compare with the Republic, the Sloss-Sheffield, and the Tennessee Coal & Iron?

Mr. GRASTY. It is a much smaller company in the matter of ores. And, by the way, when I was speaking of ores I referred to red ores and not to brown ores at all, in any estimate. I refer to red ores and not to brown ores because I don't know how much brown ore they have and I think very few furnaces really do know how much brown ore they have, unless they have gone to the trouble of systematically investigating it by a series of drill holes, which are so placed as to get the data.

Mr. YOUNG. How large are these pockets of brown ores? Of course I know they vary, but what are about the limits up and down?

Mr. GRASTY. Well, you frequently will strike a pocket—not frequently, but in some of the larger workings you will strike a pocket of 15 to 25 feet, a whole face of ore, and then that may continue for 20 or 30 feet, thinning out, of very variable shape. It may thin out to a very small pocket, to be followed by another one; or it may terminate.

As an instance of that it is related in the Birmingham district how Mr. De Bardeleben, one of the pioneers of the district, thought he had found a very valuable brown-ore deposit, and had gotten a railroad to build 10 miles to it; had ordered a whole trainload of machinery. They continued to work it, and when the trainload of machinery had arrived they had about worked the mine out, and that was the end of it.

So they are very pockety things, very risky things, unless properly tested and the tonnage accurately determined. But, as I say, I don't know where that has been done accurately in the South, unless it has been done by the Tennessee Coal & Iron Co., which I understand is doing work of that kind.

Mr. YOUNG. Do these brown ores lie in a well-defined geological district so that it is easy to find within what boundaries there is a possibility of finding the ore?

Mr. GRASTY. Well, they usually occur associated with limestone, not always, but in general—yes. So wherever these limestones are you may find more or less brown ore. But limestones occur in various geological horizons and consequently the area is very large, and so to say it is in this area is almost such a proposition as a needle in a haystack, although there are a great number of small deposits of brown ore in the South which could be worked in a small way, and in the Birmingham district in a profitable way. The trouble has been usually that they have taken a small deposit and attempted to work it in a large way.

If they would take a small equipment and work the small deposits, and let that work up, in the nature of exploratory work, as well as mining ore, and then subsequently as the property develops put in some machinery and a larger equipment, a great many brown-ore enterprises could certainly prevent a great deal of loss and might lead to a great deal of profit.

Mr. YOUNG. That kind of mining could be carried on a great deal better by a large than a small concern, could it not, and one which owned a considerable territory, where they might provide against the errors they made in one place by a find in another, and carry that on in a large way?

Mr. GRASTY. Yes; one would offset the other; that is perfectly correct.

Mr. BARTLETT. In an investigation by this committee of the subject of ore a statement was made, or the impression given out, that this Birmingham district which we have been discussing contained a greater quantity of available ore than any part of the South, or all the South combined. That made occasion for several protests, namely, from the Manufacturers' Record in Baltimore. What is the proportion of the ore to be found in this district you have been discussing, compared with the available ore in other districts in the South?

Mr. GRASTY. You want the comparison made between the South as a whole and this one district?

Mr. BARTLETT. Yes.

Mr. GRASTY. The figures which were brought out in the Manufacturers' Record showed that the Tennessee Coal & Iron Co., on such a comparison as that, which is not a proper comparison, in my mind, but is in the minds of others, showed that the Tennessee Coal & Iron Co. owned about one-fifth of the total ores in the South.

Mr. BARTLETT. That was the claim they made. The Manufacturers' Record made that statement.

Mr. GRASTY. The Manufacturers' Record had a number of articles written by different men, and the editor of it, I think, summarized what they said. He asked me to write him something about it. I took issue on the comparison, and made no such comparison.

Mr. BARTLETT. That is what I want to find out about. What is your opinion as to what proportion these ores bear to the other available ores in the South?

Mr. GRASTY. I would consider it very hazardous to express an opinion without sufficient data, and I feel that not sufficient data is to be had to make such a comparison.

Mr. BARTLETT. Do you think they had sufficient data to express an opinion that ought to be controlling?

Mr. GRASTY. They may have had; I did not have. I know of most of the sources of their information for making this comparison.

Mr. YOUNG. But is it not true as a matter of fact that outside of the Birmingham district in the South the exploration and examination has not been anything like sufficient to determine the extent of the deposits?

Mr. GRASTY. I quite agree with you, that all of the ore deposits of the South are not known or exploited by any means.

Mr. YOUNG. It is a very large territory and it is only comparatively within a few years that anything has been done at all in an extensive way.

Mr. GRASTY. Yes. It would be very unfair to that section, it would be very inaccurate to say that all of the iron-ore tonnage of the South was known. There are areas, of course, which have not been investigated where there must be, judging the future from the past, tonnages of ore amounting to millions of tons.

Mr. BARTLETT. So far as is known—I will put it in that shape—at the present time then, how does the tonnage of iron ore in this Birmingham district compare with the available known ore fields of the South?

Mr. GRASTY. If you accept the estimates as obtained from various sources, which may be more or less accurate, but which I would not undertake to vouch for, and that the men who express this opinion I do not think would vouch for fully themselves, if this question were put to them, I think they were about right in stating it, with the data they had. But, as I say, I do not value that data very highly.

Mr. BARTLETT. About one-fifth?

Mr. GRASTY. About one-fifth. It may be that the Tennessee Coal & Iron Co. owns that, and it may be that it owns more, when the whole mineral resources, the iron-ore reserves, of the South are known.

Mr. BARTLETT. But it would take quite a long time and a great deal of money to ascertain, and, after ascertaining, to develop that, would it not?

Mr. GRASTY. I think we will all be dead and gone before that is half done.

Mr. YOUNG. Don't you think a hundred generations will be dead and gone before we have ascertained all the ore there is in the United States?

Mr. GRASTY. Well, perhaps that is rather large. I think it will be a very long time.

The CHAIRMAN. It may be that on Judgment Day there will be a few tons of ore that have never been found?

Mr. GRASTY. Yes.

The CHAIRMAN. It is possible.

Mr. BARTLETT. At what other places in the South, to any considerable extent, has iron ore been developed or gotten at?

Mr. GRASTY. It has been developed in the northwestern portions of Georgia and Tennessee. There are some ores in eastern Kentucky and Virginia, and ores in western North Carolina. Some of them are valuable ores, very valuable; some of them not very valuable ores because of the content of titanium; but more or less inaccessible because of their distance from the railroads.

Mr. BARTLETT. Has the development of the ore in those places you have spoken of shown that the ore is developed in connection with limestone and other materials necessary to produce iron, like it is in the Birmingham district?

Mr. GRASTY. With the exception of western North Carolina, I should say yes. Their limestone is not so very far away, and they could haul it.

Mr. YOUNG. Is there not also some ore in Texas?

Mr. GRASTY. Yes; there are deposits in Texas.

Mr. YOUNG. Which are undeveloped?

Mr. GRASTY. They are undeveloped; yes.

Mr. BEALL. I would be glad to have you give us the benefit of anything you know about the Texas ores. Down at Rusk, Tex., they have a foundry of some kind for the manufacture of certain iron products. What kind of ore is that?

Mr. GRASTY. Most of that ore is brown ore. I am familiar with the Texas deposits only from reading the various reports which have been issued. As to these others I have seen them largely.

Mr. BEALL. According to the reports you have read of the Texas ore, how extensive are those fields?

Mr. GRASTY. In the matter of tonnage I could not say, but the impression in my mind is they have some extremely valuable ore deposits in Texas. I have heard men say who have examined these deposits that they thought extremely favoraby of them and regarded them as very large deposits.

Mr. BARTLETT. To what extent are the iron-ore mines in Georgia operated?

Mr. GRASTY. They are worked up in the northeast.

Mr. BARTLETT. Northeast or northwest?

Mr. GRASTY. Northwestern Georgia. Around Rome there are brown-ore deposits, and some very good ones.

Mr. BARTLETT. And around Cartersville?

Mr. GRASTY. Yes; around Cartersville they are very good, too.

Mr. YOUNG. Have you ever examined the deposits in Utah?

Mr. GRASTY. No. I have heard of those deposits, and according to the accounts I have read they must be very valuable deposits, down in southwest Utah.

Mr. STERLING. Is it considered there is ore in Missouri that is available?

Mr. GRASTY. Yes, there is ore in Missouri; and while that is in the South, I have not included it in, and I don't think it is included—for for instance, in this symposium in the Manufacturers' Record, in that comparison with Tennessee.

Mr. STERLING. Are they working the Missouri ores any?

Mr. GRASTY. I don't know to what extent they are.

Mr. STERLING. Is there any iron ore in Alaska?

Mr. GRASTY. I should say perhaps there was iron ore there, but I don't know of those deposits.

Mr. STERLING. Well, I heard a gentleman say, just a few days ago, who had been in Alaska some years, that there was.

Mr. YOUNG. I guess there is no doubt, Mr. Sterling, that there is some iron ore there, but I guess nobody knows very much about it, or as to its extent and value.

Mr. GRASTY. Iron probably will be the last mineral which they will develop in Alaska.

Mr. YOUNG. They have not succeeded very well in developing coal up there to date.

Mr. GRASTY. No.

Mr. YOUNG. We have been too busy conserving it.

The CHAIRMAN. Mr. Grasty, I am under the impression that the first furnace west of the Alleghenies was erected in Kentucky. Do you remember the history of the earlier blast furnaces?

Mr. GRASTY. No; I can not say I do.

The CHAIRMAN. I know it is a fact at one time nails were shipped from the city of Lexington, Ky., to the city of Pittsburgh. It is true, I believe, that the first developments in the smelting of iron were in Virginia and in that ore region; is not that true?

Mr. GRASTY. Yes, and I think if you will investigate you will find that George Washington was the Carnegie of his time.

The CHAIRMAN. From Washington's time to now do you know of any extensive operations in iron outside of the mere making of foundry iron, the comparatively primitive process of converting ore into pig that has been carried on successfully and lucratively, prosperously, in that region?

Mr. GRASTY. In Virginia?

The CHAIRMAN. In the whole southern district outside of the Birmingham district, are there any large operations in the making of iron and steel?

Mr. GRASTY. Yes, there are a number of furnace companies in Virginia which have been very successful.

The CHAIRMAN. But I mean, are there any steel works?

Mr. GRASTY. Oh, no; no steel.

The CHAIRMAN. Outside of the Birmingham district the manufacture of iron has been confined to the making of foundry iron?

Mr. GRASTY. Yes.

The CHAIRMAN. Does the value of iron ore depend in any material degree upon its proximity to coal, coking coal?

Mr. GRASTY. It does.

The CHAIRMAN. And the quality of coking coal?

Mr. GRASTY. Yes.

The CHAIRMAN. And the facility for transporting it?

Mr. GRASTY. Yes. It all enters into the cost, of course.

The CHAIRMAN. Do you know of any region in the so-called region where a fine quality of coking coal is as near the ore bodies as it is in the Birmingham district?

Mr. GRASTY. I do not.

The CHAIRMAN. Do you know of any region in that southern ore field where the limestone is as accessible as it is there?

Mr. GRASTY. No; I do not.

The CHAIRMAN. Do you know of any region in that whole southern district——

Mr. GRASTY (interposing). Well, as to the limestone, I think, perhaps, there are furnaces—in fact, I know of some furnaces—which are nearer limestone or as near limestone; but in a broad way you are correct. There is no group of furnaces which has that advantage.

The CHAIRMAN. Do you know of any region in the southern district where the facilities for transporting coal and limestone and ore are as well developed, where you have a railroad system comparable to that of the Birmingham district?

Mr. GRASTY. No; I think the Birmingham district has a distinct advantage there.

The CHAIRMAN. Can any other region where these southern ores are found enter into anything like a sharp competition, if we had competition, with the furnaces of the district where these ores are distant from its coke and coal fields?

Mr. GRASTY. Of course not, since that all goes to make increased costs.

The CHAIRMAN. Could any of these ore bodies be utilized for the purpose of sharp competition with the Birmingham district without facilities for transportation somewhat similar to the facilities now possessed by the Birmingham district?

Mr. GRASTY. You mean to say can those companies which have not these same facilities as the Birmingham district compete with them on the same basis of cost and manufacture? I would say no, not on the same basis of cost and manufacture.

The CHAIRMAN. Would the construction of railroad systems similar in character and extent to the Southern Railway, the Louisville & Nashville Railroad—you know where their tracks are?

Mr. GRASTY. Yes.

The CHAIRMAN. The Birmingham Southern, the Birmingham & Atlantic—would the construction of systems of railroad like that through that mountainous region be expensive?

Mr. GRASTY. Through which mountainous region?

The CHAIRMAN. Where these ores are located.

Mr. GRASTY. You mean ores elsewhere; you mean in Alabama?

The CHAIRMAN. I mean could you duplicate that railroad system you have at Birmingham, 200 miles above or below it in those mountains, without the expenditure of hundreds of millions of dollars?

Mr. GRASTY. No; and there would be no particular occasion why it should be duplicated because you have not the ore at those other places.

The CHAIRMAN. What is that?

Mr. GRASTY. You have not the situation for manufacturing ore at those other places.

The CHAIRMAN. That is what I mean. Then have you the red and gray ores, which I understand are to be mixed in the load of a furnace in order to make iron successfully; have you that mixture for the purpose of assembling, anywhere else except at Birmingham?

Mr. GRASTY. I do not quite know how to answer your question because I do not know that I quite understand it. Will you repeat it, just briefly?

The CHAIRMAN. The stenographer will read the question.

The stenographer read the last previous question as above recorded.

Mr. GRASTY. No; because that is the only place you have those ores in Alabama.

The CHAIRMAN. So it is a fact that the only region at present that does and can go into the steel business extensively is the Birmingham district, in the southern district?

Mr. GRASTY. Yes, sir.

The CHAIRMAN. And it will remain the only region until these disadvantages I have spoken of are overcome?

Mr. GRASTY. Yes.

The CHAIRMAN. I started to ask you about the intermingling of the gray and red ores. You spoke of having to have the red ore in order to utilize your gray ore.

Mr. GRASTY. Yes.

The CHAIRMAN. Is there any other place in that region where the red ores are found in the same thickness and the same easy transportation facilities with that you have in the Birmingham district?

Mr. GRASTY. No.

The CHAIRMAN. In this southern region are the ores red or gray principally?

Mr. GRASTY. They are chiefly red ores.

The CHAIRMAN. You were asked by Mr. Young something with reference to what you offered for these scattered areas of land which were supposed to have ore on them.

Mr. YOUNG. No; I did not ask him what he offered for scattered areas. I asked him what he offered, and he said he made no offer, but his people were willing to pay from 2 to 3 cents if they could get ore in large bodies.

The CHAIRMAN. Would they have paid more than that?

Mr. GRASTY. I think that would have been regarded as a very handsome price.

The CHAIRMAN. How many tons of southern ore in the Birmingham district does it take to produce a ton of pig iron?

Mr. GRASTY. Approximately about three.

The CHAIRMAN. How many tons of Lake Superior ore does it take?

Mr. GRASTY. Approximately about two.

The CHAIRMAN. What is the value of a ton of southerm ore as compared with a ton of non-Bessemer Lake Superior ore?

Mr. YOUNG. You mean its market value?

Mr. GRASTY. Do you refer to its efficiency as determined under the same comditions, at the same place?

The CHAIRMAN. Yes, sir; I mean its value for making iron. Say you have your ores right down at the furnace.

Mr. GRASTY. Well, if you have these at the same place under the same conditions, the same costs, not counting the assembling, just as if you were testing them in a laboratory, the value of the southern ore would be about $1.17. And if we take it at $1.17, let that be the unit, then the Lake Superior ore, on that basis, would be $2.70, on the basis of efficiency, taking a self-fluxing southern ore and comparing it with a 52 per cent Lake Superior ore. In other words, Lake Superior ore has 2.4 times the value of the southern ore on the basis of efficiency. But the Lake Superior ore costs 3.6 times as much as the southern ore.

Mr. YOUNG. Where?

Mr. GRASTY. Delivered at the furnace.

Mr. YOUNG. As the southern ores cost, delivered at the furnace?

Mr. GRASTY. Yes; three and six-tenths times as much. If therefore the Lake Superior ores had cost four and eight-tenths times as much, they would be equally valuable, but since the Lake Superior ore costs three and six-tenths times as much, instead of four and eight-tenths times as much, the ratio there of value is 75 per cent. So you could say on this basis, which I think is correct mathematically and scientifically, that if Lake Superior ore is worth $1 a ton—and I just assume that you can take, say, 40 or anything else—if Lake Superior ore is worth $1 a ton, then according to this the southern ore is worth 75 cents a ton in its habitat, where it is used, as Birmingham, against Pittsburgh.

Or, to value it in another way, if one is worth 40 cents, the other is worth 30. That I think is a correct way of comparing it.

The CHAIRMAN. That ore is worth 75 per cent as much delivered at the furnace at Birmingham as the Lake Superior ore is worth, say, delivered at the furnaces at Pittsburgh?

Mr. GRASTY. That is it exactly.

The CHAIRMAN. It does not make any difference what the price is. If it is 10 cents up here it would be 7 and a fraction there, and so on.

Mr. GRASTY. That does depend on the price, of course.

The CHAIRMAN. Explain that?

Mr. GRASTY. The efficiency of the ore, used in a scientific way, has nothing to do with the price. Of course, that does have to do with the price, too, considering both on the same basis, as tested in a laboratory, or viewing the furnace as a laboratory.

The CHAIRMAN. You make the calculation; what is the whole ratio of value of Birmingham's ores at Birmingham, compared with the Lake Superior ores at Pittsburgh?

Mr. GRASTY. The ratio is as 75 per cent value at Birmingham against $1 at Pittsburgh.

The CHAIRMAN. You were asked about that land you looked at being worth—or at least you felt authorized to offer from five hundred to a thousand dollars an acre. You would have had then to develop your mine, sink your shaft, and uncover your ore in some way.

Mr. GRASTY. Yes.

The CHAIRMAN. Could you go over there to the Woodward Iron Co. or to the Sloss-Sheffield people or to the Republic Iron & Steel or the Tennessee Coal & Iron, and buy their ores to-day for 2 or 3, or 4 or 5, or 6 or 8 cents a ton?

Mr. GRASTY. No.

The CHAIRMAN. What is that?

Mr. GRASTY. I do not think you could. Every now and then one furnace will sell some ore to another, but no furnace company would undertake to supply, say, such a company as the Alabama Consolidated or the Southern Steel. In the South each company owns its ore. There are no merchant mines. There are a few, one or two, but not enough to run a furnace company with two or three or four furnaces.

The CHAIRMAN. As I understand you, you do not mean to state, which might be drawn as an inference from what you have said, that high-grade ores in the South are only worth 2 or 3 or 5 or 6 cents a ton?

Mr. GRASTY. No; I do not mean to say that.

The CHAIRMAN. What, in your opinion, is the value of such ores as you have been talking about?

Mr. GRASTY. Value in what way?

Mr. YOUNG. You mean in the ground, in the mine, at the furnace, or where?

Mr. GRASTY. You mean on a royalty basis?

Mr. REED. You mean the intrinsic value or the market price?

The CHAIRMAN. Put it on the intrinsic value, and then put it on a royalty basis.

Mr. GRASTY. If such a mine could be run on a royalty basis I should say that 10 and 15 cents would be a very satisfactory, good royalty to pay; but it can not be done.

The CHAIRMAN. Speaking of the market price, is there any such thing as a market price, or at least is there any ore on the market at any price for the use of a man who wanted to erect a large steel works or blast furnaces in that Birmingham district now?

Mr. GRASTY. I think not.

The CHAIRMAN. Is it possible to make any estimate of the market price of ore under those circumstances for that district?

Mr. GRASTY. Well, no; because there are no merchant furnaces. Each company owns its own ore, and the companies that are so unfortunate as to be short on ore supplies have a very gloomy future ahead of them.

Mr. YOUNG. I do not quite understand your estimate of the value of Lake Superior and Birmingham ores as being as 75 to 100.

Mr. GRASTY. The efficiency, considering all questions that enter into the matter of the efficiency of the ores, taking a self-fluxing ore, against a 52 per cent Lake Superior ore, and testing them in a laboratory, or taking a furnace and considering that as a great laboratory——

Mr. YOUNG. You better take a furnace.

Mr. GRASTY. Then we will assume they got there, were assembled there without a freight rate, that they were at the same furnace being tested.

Mr. YOUNG. Yes.

Mr. GRASTY. Then on the basis of efficiency, taking into consideration all lime, silica, in the southern ore, acting in a self-fluxing way, then the higher content of Lake Superior ore——

Mr. YOUNG (interposing). Taking into consideration the less phosphorus also in Lake Superior ore?

Mr. GRASTY. Yes; it would be about—I said 2.4; I think that is correct—about 2.4 times as effective. The Lake Superior ore is 2.4 times as effective per se.

Mr. YOUNG. Right on that basis, then, on the basis of efficiency, if your Birmingham ore was worth $1 your Lake Superior ore would be worth $2.40 on the score of efficiency, would it not, if that is the only thing to consider?

Mr. GRASTY. Yes; if that was the only thing. But the argument usually stops there, and that is where the comparison ought not to end, for it ought to go into the question of cost.

If the Lake Superior ore is 2.4 times as efficient as the southern ore, then in order for the southern ore to have the same value the Lake Superior ore must cost 4.8 times as much.

Mr. YOUNG. Why so?

Mr. GRASTY. Twice 2.4 will make it that. But as it does not cost 4.8 times as much and, on the other hand, costs 3.6 times as much, and 4.8 times as much would be 100 per cent; then 4.8 divided into 3.6 gives 75 per cent.

Mr. YOUNG. That is the part of your argument I can not understand; from the time when you leave the question of efficiency I can not follow you. It may be my own fault; very likely it is.

Mr. GRASTY. I probably do not make it clear.

Mr. YOUNG. But, in other words, I take it you mean this, that 1 ton of Lake Superior ore, we will say at Pittsburgh, would produce 2.4 times as much of iron as the 1 ton of Alabama ore at Birmingham. Is that right?

Mr. GRASTY. No; I don't mean that.

Mr. YOUNG. What other items of efficiency are there, except the amount of ore produced?

Mr. GRASTY. Of course that enters into it, but it is a question of lime and fuel, all these questions entering into it.

Mr. YOUNG. That is, that there is a saving in cost?

Mr. Grasty. In the cost, so that the 1 ton of Lake Superior ore is worth 2.4 times as much on the efficiency basis.

Mr. Young. Yes.

Mr. Grasty. On account of its metallic content, its chemical composition, it is worth that. Now, you have to buy it, and when you proceed to buy it, you pay 3.6 times as much.

Mr. Young. Yes. In other words, I could afford, at Pittsburgh or Gary, to pay $2.40 for a ton of Lake Superior ore as well as I could pay $1 for a ton of Birmingham ore at the same point. Is that right?

Mr. Grasty. Yes; it is perfectly right.

Mr. Young. At the same point. Now, then, here is another question that enters into it: There is a considerable difference, is there not, in the price of pig iron at Birmingham and at Pittsburgh or Chicago?

Mr. Grasty. Yes.

Mr. Young. Is it not a fact that pig iron at Chicago or at Pittsburgh is worth something, speaking roughly, say, about $3 a ton more than it is at Birmingham?

Mr. Grasty. Because of the difference in freight rates, you mean?

Mr. Young. I don't know what the difference is, or what causes the difference. There might be some difference of opinion about that; but as a matter of fact, in the market——

Mr. Grasty (interposing). It is bound to be that way in order that the Birmingham district may meet it in competition.

Mr. Young. But as a matter of fact, that is true, is it not?

Mr. Grasty. Yes; but they make it cheaper.

Mr. Young. When you are comparing the value per ton of Lake Superior ore at Chicago and Pittsburgh, for the purpose of a steel manufacturer, with the value of a ton of southern ore at Birmingham, you have to consider not only the efficiency, have you not, and also what you can get for your product?

Mr. Grasty. Yes. If we take the cost of a ton of iron in the Birmingham district and the cost of the manufacture of a ton of iron, say, in Pittsburgh, a greater center, even, and then let us say that they have to meet at some competitive point, as, for instance, Cincinnati, then the southern iron manufacturer in order to meet his northern competitor must be able to make iron at a price which will give him a profit after he has added the freight rate, and enable him with that figure to meet his competitor at that point.

Mr. Young. Very true.

Mr. Grasty. And the Birmingham ores do that.

Mr. Young. But after all, is not the essential point to the manufacturer what he can get for his product at the furnace?

Mr. Grasty. Yes; but he adds his profit there, of course.

Mr. Young. Yes, but that is what the value of his product depends on, to my mind, what he can get for it where he makes it. Now, I was comparing this value of the pig iron at Birmingham, at the furnace, with the value of pig iron at Pittsburgh, we will say.

Mr. Grasty. Yes.

Mr. Young. And if there is a difference of, roughly speaking, $3 a ton——

Mr. Grasty. Yes.

Mr. Young (continuing). That would still further add to the discrepancy in the value of southern and northern iron ore, would it not, if the efficiency is 2.4 to 1.

Mr. GRASTY. The southern ore made into pig iron in the Birmingham district must be made, if it is going to compete, say at Cincinnati, at such a price as will cover all charges, plus a profit, plus the freight rate.

Mr. YOUNG. Why do you select Cincinnati?

Mr. GRASTY. I say Cincinnati because I think it is generally fixed here in everybody's mind what the freight rate is—I don't remember it definitely. But I know they do and can compete at that point. There are other points South where the Lake Superior ore can not compete with southern ore. So it goes. But let us take some point where they do compete largely. Now, if we can get the freight rates to that——

Mr. YOUNG (interposing). That is not the question that concerns me exactly. I want to know what this ore is worth to the northern manufacturer at Pittsburgh and what the southern ore is worth to the southern manufacturer at Birmingham, both for the purpose of making pig iron——

Mr. GRASTY (interposing). On the basis of what they pay for it?

Mr. YOUNG. On the basis of what they will get out of it. Now, you have given us the efficiency.

Mr. GRASTY. I have given the efficiency. The ore is paid for on the basis of what they pay for it. I am speaking on the basis of what they pay for it.

Mr. YOUNG. That is not the value.

Mr. GRASTY. But at the same time the Southern manufacturer does make pig iron, so that he can make a profit, whether you call it cost or value—he can make a profit, and add his freight rate, and sell in competition in a market which is nearer the other fellow's furnace.

Mr. YOUNG. Yes.

The CHAIRMAN. Is there any such difference between the price of rails or wire, or any other steel commodity, made from Birmingham pig iron and that made from basic pig iron at Pittsburgh or Chicago, as there is between pig iron itself?

Mr. GRASTY. I don't know. I dont't know the prices well enough to say.

The CHAIRMAN. If wire rails, or any other steel commodity, made from basic steel, will sell for as much made at Birmingham as if it were made at Pittsburgh or Chicago, leaving out the freight rate altogether, that is not such a serious handicap, that arbitrary difference of pig iron.

Mr. GRASTY. No; I do not see that it is.

The CHAIRMAN. Do you know of any concern or individual who is the ultimate consumer of pig iron to whom it is of any value in that shape, any more than ore?

Mr. GRASTY. You are speaking of steel?

The CHAIRMAN. I mean, would a carload of pig iron be any more valuable than a carload of ore, if the maker can not convert the ore into pig iron, or can not convert pig iron into something else?

Mr. GRASTY. Unless it can be used it has no value.

The CHAIRMAN. It is not a finished product in any sense of the word.

Mr. GRASTY. No.

The CHAIRMAN. It is not used by any ultimate consumer—the pig iron?

Mr. Grasty. The ore is not a finished product; it is a raw material. And the pig iron is the first step toward the production of the finished product, but it is not a finished product.

The Chairman. That is all.

Mr. Beall. Let me ask you just one question. I don't know anything about this whole business, much. If iron ore up in Wisconsin and Michigan is worth 85 cents a ton in the ground—I believe that is the price paid to Mr. Hill for it—what would be the relative value of a ton of iron ore in the ground in the Birmingham district?

Mr. Grasty. On the basis of efficiency and cost?

Mr. Beall. Taking everything into consideration that ought to be taken into consideration, and arrive at its relative value.

Mr. Grasty. If you will make it 84, and take three quarters of that——

Mr. Beall. Well, call it 84.

Mr. Grasty. That would be 63 cents.

Mr. Beall. It would be worth 63 cents if the other is worth 84 cents?

Mr. Grasty. Sixty-three cents to them in its own district, yes.

Mr. Young. What is the reason that Southern ore sells so cheaply?

Mr. Grasty. It sells so cheaply because it can be mined very cheaply, and because the transportation charge is small.

Mr. Young. Did you ever know the owner of a product to sell it for any less than he could get for it because he could produce it cheaply?

The Chairman. I think Mr. Grasty misunderstood you. He is speaking of pig iron and you of ore.

Mr. Grasty. No. You asked about the relative value of this basis of efficiency and cost.

Mr. Beall. Taking everything into consideration.

Mr. Grasty. I say, taking things as they are, the situation as it exists here, the ratio is 75 per cent. Now whether that is right or not is the question you ask.

Mr. Young. Yes.

Mr. Grasty. Of course the Birmingham ores could stand no such shipment as the Lake Superior ores, if that is what you mean, because the unit of cost would be very high. As I said in the beginning, in efficiency the Lake Superior ore is nearly two and a half times as great.

The Chairman. There is one question I wanted to ask you. We have been talking about 50 per cent ore and 60 per cent ore in the Superior district and 35 per cent and 40 per cent ore down here.

Mr. Grasty. Yes.

The Chairman. Can you put 20 per cent more of the Superior ore into a furnace—I mean of iron content into a furnace—than you do of iron content when you use these low-grade ores of the South? Take two furnaces of the same size, 500-ton furnaces, for instance.

Mr. Grasty. Yes.

The Chairman. One of which is to be loaded with coke and other commodities, with Superior ore, and the other one is to be loaded with the Birmingham ore.

Mr. Grasty. Yes.

The Chairman. Now, is the difference in the amount of iron content that goes into each of those furnaces measured by the difference in the iron content in the ores?

Mr. Grasty. You said could you get more Lake Superior ore into that same volume. Is that what you meant?

The Chairman. No. Here is what I mean; I mean this: Ordinarily, if you put nothing in the furnace except coke and ore, you would get 50 per cent. The difference in iron content would be measured exactly by the difference in the grade of the ores. If it was 50 per cent ore from the Superior district, and you put in 100 tons of ore, you would have 50 tons of pig iron.

Mr. Grasty. How about your limestone?

The Chairman. I mean this: If you put in 2 tons of Superior ore you would have 50 per cent of pure iron. Now, in the practical operation of your furnace is that true?

Mr. Grasty. I see what you mean. You mean, as I understand you, that the Lake Supreior ore, while much higher in metallic content than the southern ore, when the limestone is added for fluxing it, as a matter of fact you really reduce the percentages of iron, because you add two things, you mix it together, and you consequently reduce the percentage of iron.

The Chairman. In other words, it is not scientifically correct to say, for the purpose of making iron, that those limy ores in this district are 33⅓ per cent iron and leaving the furnace there is 66⅔ per cent of useless material in the making of iron?

Mr. Grasty. No.

The Chairman. If you have to have 20 per cent of limestone put in the furnace to fuse the Superior ore, it is just as much an essential part of the iron-making material as the iron itself, or the coke?

Mr. Grasty. It is; yes. That point is well taken, I think.

The Chairman. And, if I understand you, you have to mix this iron artificially with Superior ores?

Mr. Grasty. Yes.

The Chairman. How much limestone do you have to put in the furnace with a ton of superior ore?

Mr. Grasty. I don't know about that; I think about one-quarter. I am not positive at all. I can not tell you exactly.

The Chairman. About 25 per cent.

Mr. Grasty. Yes.

The Chairman. How much do you have to put with your limy ore?

Mr. Grasty. Sometimes a very small quantity; sometimes none at all.

The Chairman. Over 10 per cent?

Mr. Grasty. No; I should say not.

The Chairman. Then you can put in 15 per cent more ore into the furnace of the same size when using Birmingham ore than you can a furnace of the same size where you use Superior ores?

Mr. Grasty. Roughly, yes.

The Chairman. That is all, Mr. Grasty. The committee will go into executive session.

Thereupon, at 3.30 o'clock p. m., the committee proceeded to the consideration of executive business, after which it adjourned subject to the call of the chairman.

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No. 61

UNITED STATES STEEL CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

THURSDAY, APRIL 11, 1912

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

UNITED STATES STEEL CORPORATION.

Committee on Investigation of the
United States Steel Corporation,
House of Representatives,
Thursday, April 11, 1912—11.57 a. m.

The committee this day met, Hon. Augustus O. Stanley (chairman), presiding.

The Chairman. Mr. Bacon, you may take the stand.

STATEMENT OF DON H. BACON.

The witness was duly sworn by the chairman.

Mr. Young. Mr. Bacon, where do you live?

Mr. Bacon. New York City.

Mr. Young. What was your first employment in and about mines, and when?

Mr. Bacon. 1869; telegraph operator at Ispheming, Mich., at the Cleveland mine.

Mr. Young. How long did you continue in that employment?

Mr. Bacon. Three or four months.

Mr. Young. And then what?

Mr. Bacon. Timekeeper.

Mr. Young. In the mine?

Mr. Bacon. Yes.

Mr. Young. In the Cleveland mine?

Mr. Bacon. Yes.

Mr. Young. How long were you in that employment?

Mr. Bacon. I suppose a year.

Mr. Young. Then what position did you take?

Mr. Bacon. Clerk—clerk of the mine.

Mr. Young. How long did you remain clerk?

Mr. Bacon. I think about a year.

Mr. Young. Then what?

Mr. Bacon. Assistant superintendent.

Mr. Young. How long did you remain in that position?

Mr. Bacon. Well, except for an absence of some time, I held that position until—well, put it this way: I either held that position or was in charge of a small mine owned by the same people from 1872 up to 1880.

Mr. Young. Then what was your occupation?

Mr. Bacon. Superintendent of the Cleveland mine.

The CHAIRMAN. What mine is that?

Mr. YOUNG. The Cleveland mine. That is located at Ishpeming, Mich.

Mr. BACON. Yes.

Mr. YOUNG. And is still owned by the Cleveland-Cliff Co.?

Mr. BACON. Yes.

Mr. YOUNG. And how long did you remain after 1880 in charge of the Cleveland-Cliff property?

Mr. BACON. Until 1887.

Mr. YOUNG. Well, what was your position called?

Mr. BACON. From 1880 to 1883 I was superintendent; from 1883 to 1887 I was agent.

Mr. YOUNG. But you were in active charge of the mining operations?

Mr. BACON. Yes.

Mr. YOUNG. In 1887 where did you go?

Mr. BACON. To the Minnesota Iron Co., at Tower, Minn.

Mr. YOUNG. And what position did you occupy with them?

Mr. BACON. Manager.

Mr. YOUNG. What properties did they have at that time?

Mr. BACON. They had the hard-ore mines at Tower, Minn.

Mr. YOUNG. What were they called?

Mr. BACON. The Tower mines.

Mr. YOUNG. How long did you remain with them?

Mr. BACON. Until January, 1901.

Mr. YOUNG. Did they acquire any other properties in the meantime?

Mr. BACON. Yes.

Mr. YOUNG. What properties?

Mr. BACON. The controlling interest of the Chandler mine.

Mr. YOUNG. Near Ely?

Mr. BACON. Yes; about 20 miles northeast of Tower. The Canton, Fayal, Auburn, Elba, and two other small mines, and a good deal of property that was explored but was not opened, on what is known as the Mesabi Range.

Mr. REED. All those others are on the Vermilion?

Mr. BACON. Yes.

Mr. YOUNG. Was the Fayal on the Virmilion?

Mr. BACON. Mesabi.

Mr. YOUNG. Which of those mines were on the Mesabi that you have mentioned?

Mr. BACON. The Canton, Auburn, Fayal, and one or two small mines. The Elba is a mine of good size, and a good deal of property that we explored but did not open.

Mr. YOUNG. Had you made discoveries of ore on any of it?

Mr. BACON. Yes.

Mr. YOUNG. When you went to Tower, was the railroad built in there?

Mr. BACON. Yes.

Mr. YOUNG. Who had built that road?

Mr. BACON. The former owners. The company was dominated by Charlemagne Tower, sr., of Philadelphia.

Mr. YOUNG. They had owned the mines before the Minnesota Iron Co. obtained title to them?

Mr. BACON. The mines and the railroad.

Mr. YOUNG. When did the Minnesota Iron Co. acquire them, if you know?

Mr. BACON. In the summer of 1887.

Mr. YOUNG. So you went there at the beginning of their operations?

Mr. BACON. Yes, sir. Wait a minute. What was that question you asked me—when did who acquire them?

Mr. YOUNG. I asked you if you went to Tower at the beginning of the Minnesota Iron Co.'s operations.

Mr. BACON. No; no, because when the property changed hands, the name of the company did not change. Mr. Tower and his associates sold to a party organized in Chicago and New York—sold the stock.

Mr. YOUNG. Oh, yes. It had been known as the Minnesota Iron Co. previous to that?

Mr. BACON. Yes.

Mr. YOUNG. So it was the Minnesota Iron Co. that really built the railroad?

Mr. BACON. Yes.

Mr. YOUNG. Under its first owners?

Mr. BACON. Yes. To make it clear, the ownership of the stock changed.

Mr. YOUNG. Yes.

Mr. BACON. But the name of the corporation did not.

Mr. YOUNG. Were you familiar with the extent of the ore bodies of the—owned by the Minnesota Iron Co. at the time you left their employment, so far as they had been developed?

Mr. BACON. I think so.

Mr. YOUNG. Do you know about how much ore they had developed?

Mr. BACON. We believed that we had 247,000,000 tons.

The CHAIRMAN. What was that?

Mr. YOUNG. I asked how much ore the Minnesota Iron Co. had developed at the time he left their employment, on the 1st of January, 1901, just about three months before the Steel Corporation took them over, and his answer is, "We believed we had 247,000,000 tons." Had there been any shipments at that time from the Mesabi?

Mr. BACON. Yes.

Mr. YOUNG. How much of this 247,000,000 tons was on the Mesabi?

Mr. BACON. All, with the exception of four of five millions.

Mr. YOUNG. The Minnesota Iron Co. had no interest in the railroad running into the Mesabi Range at that time, had it?

Mr. BACON. Yes. The Minnesota Iron Co. owned the railroad.

Mr. YOUNG. Into the Mesabi?

Mr. BACON. Yes.

Mr. REED. The Duluth & Iron Range runs to both ranges?

Mr. YOUNG. Oh, yes. You mean you owned the Duluth & Iron Range?

Mr. BACON. Yes.

Mr. YOUNG. But you did not own the Duluth, Mesabi & Northern?

Mr. BACON. Had no interest in that.

Mr. YOUNG. And the Minnesota Iron Co. had built the Duluth & Iron Range to reach their own properties?

Mr. Bacon. Yes.

Mr. Young. Do you know anything about——

The Chairman. They also reached the property of other concerns at the same time, did they not?

Mr. Bacon. I do not recall.

The Chairman. They reached other ore bodies besides the ores of the Minnesota Co.?

Mr. Bacon. I do not recall that the road carried ore for anyone else at that time.

The Chairman. Did you tap the Mesabi Range at the same time you did the Vermilion?

Mr. Bacon. Oh, we reached the Vermilion Range some eight years earlier.

Mr. Young. When did you build into the Mesabi? Let us get that.

Mr. Bacon. I think it was 1900. The records will show exactly. I won't trust my memory on that.

Mr. Young. Yes. Had you any knowledge as to the extent of the developments of other ores on those two ranges except what the Minnesota Iron Co. owned?

Mr. Bacon. Very little ore was known at that time to exist on the Vermilion Range outside of the Minnesota and Chandler mines, which belonged to the Minnesota Co.

Mr. Young. Was the Pioneer opened at that time?

Mr. Bacon. Which year are you referring to?

Mr. Young. In 1901, when you left, the 1st of January.

Mr. Bacon. Oh, yes; the Pioneer was a good producer. I was dating it a little earlier than that. Of the Mesabi Range I had a general knowledge, such as anyone would have who was mining.

Mr. Young. Could you give any estimate as to the amount of ore that was known to exist on the Mesabi at that time?

Mr. Bacon. Oh, no.

Mr. Young. Who owned the Pioneer?

Mr. Bacon. In 1901 the Pioneer was owned or controlled by the Carnegie Steel Co.

Mr. Young. How long before had they acquired their interest in it, if you know?

Mr. Bacon. I should say three or four years earlier.

Mr. Young. Had the Pioneer shipped anything before the Carnegie Co. acquired their interest in it?

Mr. Bacon. Yes.

Mr. Young. Who was operating it then?

Mr. Bacon. The Pioneer Iron Co., as I recall; but I can not tell you who the stockholders were.

Mr. Young. Do you remember who was in charge of the property?

Mr. Bacon. At one time there was a man named Sturdevant. I think he died since.

Mr. Young. H. B. Sturdevant?

Mr. Bacon. Yes.

Mr. Young. That was previous to the Carnegie Co. being interested in it?

Mr. Bacon. Yes.

Mr. Young. Were there any other mines shipping over the Duluth & Iron Range except the Pioneer and the properties of the Minnesota Iron Co.?

Mr. Bacon. The Zenith mine shipped ore.

Mr. Young. It never shipped enough to hurt anybody, did it?

Mr. Bacon. Not up to that time.

Mr. Young. Do you remember who was operating it?

Mr. Bacon. No.

Mr. Young. Do you know anything about how much ore there was in the Pioneer in 1901?

Mr. Bacon. No.

Mr. Young. How large shippers were they?

Mr. Bacon. I can not recall.

Mr. Young. When you left the Lake Superior district, January 1, 1901, where did you go?

Mr. Bacon. With the Tennessee Coal, Iron & Railroad Co.

Mr. Young. At Birmingham?

Mr. Bacon. Yes.

Mr. Young. You went there in what capacity?

Mr. Bacon. Chairman.

Mr. Young. What?

Mr. Bacon. Chairman of the board of directors.

Mr. Young. How long did you remain with the Tennessee Coal & Iron Co.?

Mr. Bacon. Until May, 1906.

Mr. Young. You had the same position during all of that time?

Mr. Bacon. Yes. The duties of president were added in the early winter of 1901.

Mr. Young. So you were the chief executive officer?

Mr. Bacon. Yes.

Mr. Young. And where did you live?

Mr. Bacon. Nearly all of the time at Birmingham; the rest of the time in New York.

Mr. Young. You were in active charge of the mining and manufacturing operations of the company?

Mr. Bacon. Yes.

Mr. Young. Who were the principal owners of the Tennessee Coal & Iron Co. at that time?

Mr. Bacon. New York men. I would say that Mr. James T. Woodward was probably the largest stockholder.

Mr. Young. James T. Woodward, who is interested in the Woodward Iron Co.?

Mr. Bacon. No.

Mr. Young. Another man?

Mr. Bacon. Yes; he was president of the Hanover National Bank, of New York.

Mr. Young. And what others were among the——

Mr. Bacon. Mr. Cord Meyer was a stockholder; Benjamin F. Tracy, F. S. Witherby——

Mr. Young. That is, Frank Witherby, of the Champlain district?

Mr. Bacon. Yes. Mr. J. Henry Smith, and I think at that time the stock was fairly well scattered.

Mr. Young. Well, what did the business of the Tennessee Coal & Iron Co. consist of?

Mr. Bacon. Mining ore and coal and making pig iron and steel.

Mr. Young. What kind of steel did you make?

Mr. Bacon. Open hearth.

Mr. YOUNG. What did you manufacture it into?

Mr. BACON. Rails and boiler plate.

Mr. YOUNG. You had a rail mill?

Mr. BACON. Yes; so called.

Mr. YOUNG. Why do you use that term?

Mr. BACON. Well, it was a very indifferent mill.

Mr. YOUNG. What was the trouble with it?

Mr. BACON. Well, it was designed by a man who did not understand the making of open-hearth steel and was a very inefficient and costly machine.

Mr. YOUNG. It was not an efficient mill?

Mr. BACON. No. When I use the word "mill" I am referring to the whole open-hearth plant and not to the rail mill particularly.

Mr. YOUNG. The whole plant was inefficient?

Mr. BACON. Yes; I would say of the rail mill itself, where the steel was rolled into rails, that that unit was very good, but the open-hearth department was very poor.

Mr. YOUNG. What did the property——

The CHAIRMAN. He refers there to the open-hearth furnace.

Mr. BACON. The open-hearth department, I said. That would mean the furnaces.

Mr. YOUNG. What did the plant consist of?

Mr. BACON. Do you mean the steel plant?

Mr. YOUNG. Well, the whole thing that you had there, aside from your ores and coal, I mean—the manufacturing part of it.

Mr. BACON. We used 10 open-hearth furnaces, 1 rail mill, 13 blast furnaces, and 1 blast furnace at Whitwell, Tenn.

Mr. YOUNG. How far is that from Birmingham?

Mr. BACON. I suppose 150 miles.

Mr. YOUNG. Did you own any ores in that section?

Mr. BACON. Very little, but did own large beds of coal.

Mr. YOUNG. Well, what is the character of the ore in the Birmingham district that was owned by your company?

Mr. BACON. The larger part is known as red ore and carries from 36 to 37 per cent metallic iron.

Mr. YOUNG. It is a non-Bessemer?

Mr. BACON. Yes, sir.

Mr. YOUNG. Is there any Bessemer ore at all in that district?

Mr. BACON. I do not know of any.

Mr. YOUNG. In 1906, when you left the Tennessee Coal & Iron Co., did it then own any railway property there?

Mr. BACON. No.

Mr. YOUNG. Had it at any time previous to that?

Mr. BACON. Yes.

Mr. YOUNG. What railroad property?

Mr. BACON. It was known as the Birmingham Southern and had been sold by the Tennessee company prior to my going there—I think about the year '99—1899. To the furnaces I have mentioned I should add two more that the company owned at Sheffield, Ala.

Mr. YOUNG. How far is Sheffield from Birmingham?

Mr. BACON. Oh, I guess about perhaps a little less than 100 miles.

Mr. YOUNG. In what direction?

Mr. BACON. About west, as I recall it, is it not?

Mr. REED. Yes.

Mr. Young. What railroads served the district while you were there?

Mr. Bacon. The Southern Railway and the Louisville & Nashville.

Mr. Young. And what was this Birmingham Southern road that the company had owned at one time?

Mr. Bacon. That was the road over which most of the coal and coke was brought from the mines and coke ovens to the furnaces at Ensley and to the furnace in Birmingham and for the movement of freight, supplies of different kinds from the railroad at Birmingham out to Ensley.

Mr. Young. Was that road built originally by the Tennessee Coal, Iron & Railway Co.?

Mr. Bacon. I think it was.

Mr. Young. Do you know what reasons led to the sale of that railroad by the company?

Mr. Bacon. Well, the reason given by the sellers was their belief that the purchasers, which were the Southern Railroad and the Louisville & Nashville Railroad Cos., could operate it or would operate it at less cost per ton of movement than the Tennessee Co. was operating it.

Mr. Young. Well, how did that work out in practice?

Mr. Bacon. Well, it was rather discouraging to the sellers.

Mr. Young. How so?

The Chairman. Was it incorporated as a separate company?

Mr. Bacon. The Birmingham Southern was a separate company, the stock being held by the Tennessee Coal, Iron & Railroad Co.

Mr. Young. Do you remember what its capital was?

Mr. Bacon. No; I do not.

Mr. Young. Why was it discouraging to the sellers?

Mr. Bacon. The cost per ton of movement was high.

Mr. Young. That was the cost that was charged by the railroad companies to the Tennessee Coal & Iron Co.?

Mr. Bacon. Yes.

Mr. Young. Do you remember what it was?

Mr. Bacon. It varied for the different things done. I do not remember the cost per ton. The charges were not made per ton, but the total cost each month for the movements.

The Chairman. Do you know about what it was?

Mr. Bacon. Oh, I can not——

The Chairman. For instance, there is a flat rate of 12.5 cents a ton within a radius of 25 miles of Birmingham now. Was it above or below that?

Mr. Bacon. What is that?

The Chairman. Was it higher or lower than that rate now maintained in the Birmingham district of 12.5 cents a ton?

Mr. Bacon. That was not the same service. The rate you refer to is made by the Louisville & Nashville Railroad for moving ore from the mines to the furnaces. The Birmingham Southern did not move ore from the mines, but only moved coal from the coal mines and coke from the coke ovens, and was more in the nature of a switching road or yard than the main line of a railroad.

The Chairman. My understanding is that they haul everything needed at the blast furnaces—coal, coke, ore—within that radius at 12.5 cents a ton now.

Mr. BACON. Yes; the Louisville & Nashville Railroad and the Southern do that, I think.

The CHAIRMAN. Now, what I am asking is not about the character of the service, but the cost of it. Did they charge you, after you got rid of this road, more or less than 12.5 cents a ton within that 25-mile radius for the service on the Birmingham Southern road, after you lost control of it?

Mr. BACON. Well, I can hardly tell you, Mr. Chairman. They charged the cost per month for the work done.

Mr. YOUNG. A lump sum, you mean?

Mr. BACON. No; whatever the expenses were, they keeping up the locomotives and the track, and doing all the movement.

Mr. YOUNG. Oh, they were to furnsih the service at cost; was that the idea?

Mr. BACON. Yes.

Mr. YOUNG. And the cost went up then, after, as compared with the cost when the Tennessee Coal & Iron Co. ran it?

Mr. BACON. We thought it had. Remember, I never saw any cost sheets of movement—never saw any sheets showing the cost of movement over that railroad when it belonged to the Tennessee Coal & Iron Co. I only know something about the cost after they had parted with it.

Mr. YOUNG. Yes; and you thought it an unreasonable cost?

Mr. BACON. I thought so; yes.

Mr. YOUNG. Was that the idea?

Mr. BACON. Yes.

Mr. YOUNG. But the Tennessee Coal & Iron Co. had not bought the road back until after you——

Mr. BACON. No.

Mr. YOUNG (continuing). Left the company?

Mr. BACON. No.

Mr. YOUNG. At the time you left the company, what do you know of the extent of its deposits of iron ore?

Mr. BACON. We believed we had about 400,000,000 tons of iron ore.

Mr. YOUNG. Well, what was that belief based on?

Mr. BACON. Partly on our openings underground, and partly on drill holes, and partly on the geological structure of the country.

Mr. YOUNG. I will ask you this: Is the geological formation there such that you can determine the amount of the deposits with a considerable degree of accuracy?

Mr. BACON. Yes.

Mr. YOUNG. In the 400,000,000 tons of ore do you refer to ore that was merchantable and available at that time?

Mr. BACON. Yes.

Mr. YOUNG. And you do not include ores of too low grade to be used?

Mr. BACON. No.

Mr. YOUNG. These were the ores that would run 36 to 37 per cent?

Mr. BACON. Yes.

Mr. YOUNG. What proportion, if you know, of the ores of that Birmingham district were at that time owned by the Tennessee Coal & Iron Co., of the available ores?

Mr. Bacon. Well, an answer to that will involve some explanation.

Mr. Young. Well, let us have it.

Mr. Bacon. There is a valley known as Shades Valley, and the mines that were being operated were being extended from the crest of Red Mountain down under that valley and extended along the crest for a distance of 15 miles or more. From the mines extending along there for 15 miles the furnaces then got their supply of red ore. Taking the 15 miles that was then being operated, and assuming that the ore extended over to Shades Mountain, which has since been proved by drill holes, and which we believed at the time to be true, the Tennessee Co. owned about 30 to 33 per cent of that valley, but their body of ore extends much farther than the 15 miles, getting somewhat thinner as it extends farther, sometimes richer—a little higher in iron content; and the mining had been carried a much longer distance to the northeast—greater distance to the northeast, and probably will be again.

Mr. Young. Well, you say 33⅓ per cent. You refer to the acreage?

Mr. Bacon. To the acreage; yes.

Mr. Young. Well, my question related more to the tonnage—the estimated tonnage. What proportion of the estimated tonnage in the district——

Mr. Bacon. Well, I would say that our percentage of acreage would be about the same of the tonnage. Their body of ore is very much like a coal seam; varies but slightly in thickness or in iron content.

Mr. Young. I will say to you, Mr. Bacon, that we have had some contradictory testimony along this line. Mr. Burchett, who represented the Geological Survey, made an estimate down there which would agree in percentage very closely with yours. What was this witness we had here?

Mr. Reed. Grasty.

Mr. Young. Prof. Grasty, now of the University of Virginia, was also in the district for some time, and made an examination of it, and his estimate is that the Tennessee Coal & Iron Co. had about one-half of the ore in that district, and it is for this reason that I wanted to get your estimate and what you base it on.

Mr. Reed. Mr. Young, Mr. Grasty told us after lunch that day that he had made a mistake in his figures, and that instead of 50 it had about 70 per cent, so that he testified both ways.

Mr. Young. That they owned 70 per cent?

Mr. Reed. That was his last estimate.

Mr. Young. I had forgotten that.

The Chairman. Well, I think, if I remember correctly, he testified that they owned fifty odd per cent of all the available ores, and he carried the comparison further and took in not only the available ores, but all ores which would ultimately be available; ores which now could not be economically mined on account of their low iron content or on account of their being siliceous or not self-fluxing, or for some other reason; that then the large holdings of the Steel Corporation beyond Shades Valley being greatly in excess of the holdings of similar ores of other companies, their holding of all ores, both the available and those ultimately available, would be seventy-odd per cent.

Mr. Reed. The chairman will remember that Mr. Grasty said that he had added the same figures twice in the morning, and that gave him a result of 50 per cent. but when he did not add them twice—whatever he meant by that, that he got a result of 70 per cent.

The Chairman. That was the distinction I understood him to draw; that their reserve ore was much greater than the other companies.

Mr. Young. That is, low-grade ore.

Mr. Bacon. I would differ from Mr. Grasty.

Mr. Young. I suppose you, as the executive officer of this company, were interested in finding out what the facts were?

Mr. Bacon. Yes.

Mr. Young. And will you describe what examinations you had made on which you base your estimate of about one-third of the ores available?

Mr. Bacon. First, there was the outcrop. You understand what I mean?

Mr. Young. Yes.

Mr. Bacon. Extending along there in the territory—along the territory I am now speaking of, for about 15 miles.

Mr. Young. Was that a steady outcrop all the way?

Mr. Bacon. Yes; never covered with anything but a little dirt, and not always even with dirt; could be traced readily. An opening had been made for nearly that entire distance, and mining was being carried on at various points at that time. I think our deepest opening from which we were hoisting was some 2,000 feet on the slope of the ore, and we had a number of drill holes that were way in advance of our workings—a mile or so beyond our workings. Then the country was the same clear across Shades Valley and under Shades Mountain, and we had every right to suppose that the ore on which we were working would extend at least as far as Shades Mountain. If that were an upheaval, the ore would be broken, but if the valley had been eroded, the ore should be there, and that would be true of the whole valley.

Mr. Young. Yes.

Mr. Bacon. And I learn that since I left there holes have been bored just at the foot of Shades Mountain by the Tennessee Co. and other people, and they have found the ore there. Now, we knew the tonnage per acre from the acres we had mined, and multiplying the acres owned by the tonnage per acre gave us about 400,000,000 tons.

The Chairman. And you carried your calculation to the foot of Shades Mountain?

Mr. Bacon. As far as the Tennessee Co. owned, which was close to Shades Mountain.

The Chairman. Did you own under Shades Mountain?

Mr. Bacon. The company owned a few acres on the other side of Shades Mountain.

The Chairman. How about Shades Mountain itself?

Mr. Bacon. The Tennessee Co. did not own it. Shades Mountain is a long ridge, Mr. Chairman; not a peak.

Mr. Young. This ore runs in veins?

Mr. Bacon. It lies more like a bed of—like a coal bed; like that table, broken in places, but not seriously.

Mr. YOUNG. And the thickness is pretty uniform through this entire territory?

Mr. BACON. Yes.

Mr. YOUNG. And do you remember how many veins are there?

Mr. BACON. Well, we had only one vein, but in some of the mines they speak of two veins, but the two are separated only by a little stratum of slate, and they are mined together usually.

The CHAIRMAN. You mean you worked only one. You had the title in fee to the land; you owned to the center of the earth?

Mr. BACON. Oh, yes; there was only one vein on most of the land I speak of, but where there are two veins, as they speak of down there, they are separated only by a few inches of slate, and the two are worked at one time. Sometimes the lower one is a little higher in silicia, and that is left and the upper one only is taken.

Mr. YOUNG. But you regard it practically as one vein?

Mr. BACON. Yes.

Mr. YOUNG. The separation is so slight?

Mr. BACON. Yes.

Mr. YOUNG. And that was the way you treated it on the Tennessee property?

Mr. BACON. Yes.

Mr. YOUNG. Did that condition exist on the Tennessee property, that there was this slight separation from slate?

Mr. BACON. Some places, and in some places we only had one vein.

Mr. YOUNG. Was the lower vein workable on your property?

Mr. BACON. It had been worked; yes.

Mr. YOUNG. Was it as high grade as the one above it?

Mr. BACON. No. Lower in iron and higher in silica.

Mr. YOUNG. What other companies were operating down there?

Mr. BACON. The Republic, the Woodward——

Mr. YOUNG. By "Republic," you mean the Republic Iron & Steel?

Mr. BACON. The Republic Iron & Steel Co. The Woodward Iron Co., the Sloss-Sheffield Steel & Iron Co., and what was then known as the Vanderbilt furnace. It has since been called the—what is it?

Mr. REED. Southern Steel, is it not?

Mr. BACON. No.

Mr. REED. Alabama Consolidated?

Mr. BACON. No; the Birmingham Iron Co. Later called the Birmingham Iron Co. I would say, Mr. Young, in addition to the ore I have described, the Tennessee Co. owned some deposits of brown ore. The brown ore is usually a little higher in iron, running about 45 per cent, but the deposits—those owned by the Tennessee Co. were, in no case, very large, and were not very reliable.

Mr. YOUNG. Where were they located, these brown-ore deposits?

Mr. BACON. They were southeast of Birmingham some 20 miles, as I recall it.

Mr. YOUNG. Have you figured those in your estimate of 400,000,000 tons?

Mr. BACON. We did allow something for it. I have forgotten now how much.

The CHAIRMAN. About how many tons do you suppose you had of brown ore?

Mr. BACON. We thought we had something like half a million tons, but we never considered them a very valuable asset, because they were so unreliable in quantity and variable as to quality.

Mr. YOUNG. Do you remember what your costs to manufacture pig iron were while you were in charge of the company?

Mr. BACON. Well, they were rather high.

Mr. YOUNG. Why was that?

Mr. BACON. Of all the furnaces that were there when I went there, none were modern. We built a furnace in 1900, and I think, started it in 1904, that was modern and very well equipped. At that furnace we made a very good cost, but the old furnaces always made a high cost.

Mr. YOUNG. About what was that cost in the old furnaces, if you remember?

Mr. BACON. What is that?

Mr. YOUNG. About what was the cost per ton in the old furnaces?

Mr. BACON. In the old furnaces?

Mr. YOUNG. Yes.

Mr. BACON. I should say the cost would be or that the cost was between $10 and $11.

Mr. YOUNG. This period when you were in charge embraced the years of low prices, low cost?

Mr. BACON. Yes.

Mr. YOUNG. From 1901 to 1906?

Mr. BACON. Yes.

Mr. YOUNG. What cost did you get down to in your new furnace—your modern furnace?

Mr. BACON. We did it at about $7 a ton. Perhaps I ought to make that a little higher, considering repairs from time to time.

Mr. YOUNG. Under $8, was it?

Mr. BACON. Yes; say under $8.

Mr. YOUNG. Yes.

Mr. BACON. That would be fair.

Mr. YOUNG. Do you remember what the cost of the manufacture of your rails was?

Mr. BACON. Nearly $30; between $25 and $30.

Mr. YOUNG. You attribute these costs largely to the condition of your plant?

Mr. BACON. Yes; our rail cost was excessive because of the plant being imperfect.

Mr. YOUNG. Now, in figuring these costs of pig iron, what did you charge up for the value of your ore?

Mr. BACON. We charged the cost of the ore plus 5 cents a ton royalty.

Mr. YOUNG. Were you paying any royalty?

Mr. BACON. No.

Mr. YOUNG. That is, you figured that your ore was worth 5 cents a ton in the ground?

Mr. BACON. Yes.

Mr. YOUNG. And you charged that amount to the——

Mr. BACON. Yes; the same on the coal.

Mr. YOUNG. What did you figure as the cost of your coal?

Mr. REED. Cost or value?

Mr. YOUNG. Value of your coal?

Mr. BACON. We charged 5 cents for it. In both cases those were arbitrary sums.

Mr. YOUNG. What was the extent of your ore deposits—of your coal deposits at the time you left there?

Mr. BACON. We thought that on the lands of the company in Alabama, both Jefferson and Jasper Counties, and Bibb County, and in Tennessee, we had probably a billion tons of coal.

Mr. YOUNG. A billion tons, and what relation did your coal bear in quantity to the entire coal of the district, if you know?

Mr. BACON. What?

Mr. YOUNG. About what proportion of the coal in the district did your company own?

Mr. BACON. I do not suppose we had to exceed one-tenth. Maybe not more than one-twentieth.

Mr. YOUNG. There were very large bodies of coal there?

Mr. BACON. Oh, enormous, and coal has been discovered since I left there. Possibly the company does not own now more than one-fiftieth.

Mr. YOUNG. Was this coal in a few hands or in many hands?

Mr. BACON. Many hands.

Mr. YOUNG. I suppose the other steel companies—iron companies—owned large bodies of coal?

Mr. BACON. I believe that they have had to acquire coal since. The Republic had a good holding. I think Mr. Woodward's holding was rather small. The Sloss-Sheffield people had a good acreage.

Mr. YOUNG. What was the reason your company did not improve its plant?

Mr. BACON. It did not have the money.

Mr. YOUNG. Why didn't you do it out of your profits?

Mr. BACON. They were too small.

Mr. YOUNG. Where did you sell your pig iron?

Mr. BACON. Quite a good deal at Cincinnati; sometimes to Detroit, St. Louis; occasionally, some to New England and different points between; some to Philadelphia.

Mr. YOUNG. You sold some through the South, did you not?

Mr. BACON. A very small tonnage indeed. The consumption in the South was almost nil.

Mr. YOUNG. Do you know whether that has increased considerably since, or not?

Mr. BACON. I do not. That was an agricultural country, you know, from where we were clear to the Gulf.

Mr. YOUNG. Yes.

Mr. BACON. Very few foundries and no large shops—manufacturing shops—very little demand for pig iron, so we never thought of the district south of Birmingham as offering a market.

Mr. REED. I think the figures already in the record, Mr. Young, show that the consumption of pig iron in the South has remained stationary since 1900.

Mr. YOUNG. Did your company pay dividends?

Mr. BACON. A part of the time.

Mr. YOUNG. What was its capitalization, do you remember?

Mr. BACON. I think it was $23,000,000.

Mr. YOUNG. There was some small amount of preferred stock?

Mr. Bacon. I do not recall that there was any preferred stock of the Tennessee Company. There was some preferred stock of the Alabama Steel & Shipbuilding Co., which was a subordinate company that owned the steel plant, and a little of that stock was out, but all of the common stock and some of the preferred stock was in the treasury of the Tennessee Coal, Iron & Railroad Co., but you have records of the capitalization at that time which are better than my memory.

Mr. Young. What dividends were paid, if you remember?

Mr. Bacon. We paid 6 per cent for a short time.

Mr. Young. What year?

Mr. Bacon. 1905, I think it was—1904 or 1905.

Mr. Young. Did you stop after that?

Mr. Bacon. When the new people took the property they stopped.

Mr. Young. When did they take it?

Mr. Bacon. Nineteen hundred and—I think they bought the control in December, 1905, and they took——

Mr. Young. And you remained until what time in 1906?

Mr. Bacon. Until May, 1906.

Mr. Young. Yes. Do you remember what your freight rates were at that time to these points that you have mentioned—Cincinnati, and so forth?

Mr. Bacon. No; I do not.

Mr. Young. At these northern points did you have to compete with the northern pig iron?

Mr. Bacon. Yes.

Mr. Young. Your cost was somewhat lower than that of the northern furnaces, even at $11?

Mr. Bacon. I am not sure.

Mr. Young. Your freight rates were higher in reaching the market at the North?

Mr. Bacon. Well, we could not reach the northern market very often—say like Detroit or Cleveland or Chicago. Only in times of very high prices could we put pig iron into those places.

Mr. Young. But you did get into Cincinnati?

Mr. Bacon. Yes.

Mr. Young. And New England?

Mr. Bacon. Occasionally into New England.

The Chairman. The committee will be adjourned until 2 o'clock.

Whereupon a recess was taken until 2 o'clock p. m.

AFTER RECESS.

The committee met at 2 o'clock p. m., pursuant to the taking of recess, Hon. Augustus O. Stanley (chairman) presiding.

STATEMENT OF DON H. BACON—Continued.

The Chairman. Mr. Young, will you proceed?

Mr. Young. I think I am about through, Mr. Chairman.

Mr. Bacon. Do you understand how the ore occurs down there—the red ore that we have been speaking of?

Mr. Young. We have had considerable testimony about it. What was it you wished to say about it?

Mr. Bacon. How it lies. Do you understand that?

Mr. Reed. It has been explained on the map.

Mr. Young. I would be glad to have you go ahead and explain it.

Mr. Bacon (illustrating by the use of books). This is the bed of ore—sometimes at an angle of 30°, often flatter. As it goes across the valley it gets flatter and sometimes broken. It is often raised up here or broken that way [indicating]. It is just as a bed of coal might be.

The Chairman. You spoke of the rail mill there at Ensley.

Mr. Bacon. Yes.

The Chairman. What was the trouble with this rail mill?

Mr. Bacon. The trouble was with the open-hearth furnaces.

The Chairman. You had a very good mill?

Mr. Bacon. The mill was good; oh, yes.

The Chairman. The trouble with your furnaces was that it was too expensive to convert the steel in them.

Mr. Bacon. Yes; they were illy designed for the work they had to do.

The Chairman. Have those mills been changed—the design—in any way so as to make them modern; or would you have to construct new furnaces?

Mr. Bacon. They have been torn down and new ones put in. That was the better thing to do.

The Chairman. Was that done subsequently?

Mr. Bacon. Yes.

The Chairman. What was the approximate cost of replacing the old furnaces with new ones?

Mr. Bacon. I can not tell you; that work was done after I left.

The Chairman. Was that done by your successors?

Mr. Bacon. It was partly done by my immediate successors, the Republic Steel Co., and finished by the Steel Corporation.

The Chairman. Do you know the approximate cost of that work?

Mr. Bacon. No; I have never seen the figures.

The Chairman. Is an open-hearth furnace with the capacity of those at Ensley and other points, such furnaces as are owned by the Tennessee Coal & Iron Co., an expensive operation?

Mr. Bacon. The building of them?

The Chairman. Yes.

Mr. Bacon. Yes; they are costly.

The Chairman. Do they cost anything like a blast furnace?

Mr. Bacon. No.

The Chairman. What does a good open-hearth furnace cost?

Mr. Bacon. I can not tell you now. The ones I had charge of were built before I arrived there and their cost was included in the total sum for the whole steel plant, so no figures were available showing the cost of each furnace.

The Chairman. Have you had any experience in the construction of open-hearth furnaces?

Mr. Bacon. No; I have not.

The Chairman. I have seen these furnaces, but I could not make any estimate of the cost of one of them.

If at the time you were operating this steel plant you had a rail mill, a fair blast furnace, and received orders for, say, a couple hundred thousand tons of rails at a dollar or two dollars above the price of the Bessemer rail, and orders for other steel products, would you have found any great difficulty either in the loss of time or in necessary capital to have constructed such open-hearth furnaces as were necessary if you had all the other things at hand?

Mr. BACON. We had rail orders in excess of our ability to produce, but our directors were never willing either to increase the stock or vote additional bonds.

The CHAIRMAN. Did you regard that as good business policy not to do that, when you had the ore and coke and the blast furnaces and the orders?

Mr. BACON. I thought they should have spent the money.

The CHAIRMAN. If given an up-to-date blast furnace and other facilities for the making of basic pig iron and steel, do you know of any region in this country that is comparable with that at Birmingham for the cheap production of iron and steel?

Mr. BACON. No.

The CHAIRMAN. In what does that advantage consist, Mr. Bacon?

Mr. BACON. Nearly all in the short movement of the material, the ore and coal.

The CHAIRMAN. How many tons of this red ore does it require to make a ton of pig iron?

Mr. BACON. Well, a little less than 3 tons, say 36 per cent, would make a ton of pig iron contain about 96 to 97 per cent of metallic iron. So there is iron content enough in 36 per cent ore to make 96 or 97 per cent pig iron.

The CHAIRMAN. You can figure that you have only 36 per cent metallic iron in the ore?

Mr. BACON. Yes.

The CHAIRMAN. And a ton of pig iron is 100 per cent?

Mr. BACON. No; 1 ton of pig iron would be 96 to 97 per cent, because in there is a little silica, a little sulphur, and a little phosphorus.

The CHAIRMAN. And you have as many tons of ore as the per cent of this iron content goes into the per cent of the ton of pig iron?

Mr. BACON. Yes; very little is lost.

The CHAIRMAN. What amount of limestone did you use with this ore in making the pig iron?

Mr. BACON. With some of the ore we used scarcely no limestone, what is called self-fluxing ore, which has limestone in it, so that it would take care of itself. In the other ore I can not remember the number of pounds, but perhaps three or four hundred pounds of limestone to a ton of pig iron. Those figures are all available, Mr. Chairman, if you wish to get them.

The CHAIRMAN. When you used Bessemer ores, how much?

Mr. BACON. We had no Bessemer ore there.

The CHAIRMAN. But you have been in the steel business?

Mr. BACON. I have not been in charge of a steel plant where Bessemer ore was used, or in charge of furnaces where Bessemer ore was used.

The CHAIRMAN. You do not know how much limestone was used in Bessemer ores?

Mr. BACON. No.

The Chairman. What per cent did you say was in a ton—96 per cent?

Mr. Bacon. Ninety-six to ninety-seven per cent. The amount of silica varies from time to time. At times there would be even a less percentage of iron; sometimes only 95.

The Chairman. That would be 2⅔ tons of ore to 1 ton of pig iron?

Mr. Bacon. Yes.

The Chairman. If it takes 2⅔ tons of ore to a ton of pig iron in the Birmingham district and it takes 2 tons of non-Bessemer ore in the Pittsburgh district to make a ton of pig iron, would you consider the value of the ores in that ratio?

Mr. Young. Commercial value, you mean?

The Chairman. The intrinsic value—the value for the purpose of making pig iron. Is the pig iron that is made from a Bessemer ore—or take non-Bessemer ores first. There is a great deal of non-Bessemer ore in the Lake Superior district, is there not?

Mr. Bacon. Yes.

The Chairman. Is the pig iron that is made from that non-Bessemer ore in the Lake Superior district alike in quality to pig iron made from the red ore of the Birmingham district?

Mr. Bacon. I would say they would be alike with this difference only, that the percentage of phosphorus in the Birmingham pig iron would be somewhat higher.

The Chairman. Than even in a non-Bessemer ore?

Mr. Bacon. Yes; I think so.

The Chairman. Is that percentage of phosphorus any very serious detriment where you use the open-hearth process?

Mr. Bacon. The purpose of the open-hearth process is to remove the phosphorus.

The Chairman. And you can remove two or three tenths of 1 per cent of phosphorus as cheaply and as readily as you can 1 per cent of phosphorus?

Mr. Bacon. There is a little more treatment; a little more material used.

The Chairman. What is the amount of phosphorus?

Mr. Bacon. About ⅛ per cent of the pig iron.

The Chairman. And do you take that out readily with the open-hearth process?

Mr. Bacon. Yes.

The Chairman. Is the steel billet, a basic billet made at the Birmingham district, as good in quality as the basic billet made in the Pittsburgh district?

Mr. Bacon. Oh, yes.

The Chairman. What is the difference in the cost of making a ton of billets in the Birmingham district and the cost of making a ton of billets, say, in the Pittsburgh district?

Mr. Bacon. I can not answer, Mr. Chairman, because I have never had the figures of the cost of making billets with the new open hearth that the Tennessee Co. has nor the figures of the cost of making them at Pittsburgh.

The Chairman. I am not speaking now of plants actually in operation. I am simply assuming you have the same facilities for making steel in both places.

Mr. Bacon. The difference ought not to be great.

The Chairman. I am speaking now simply of the difference of doing the work, not considering any other matter. It is a small difference?

Mr. Bacon. It ought not to be great.

The Chairman. What is the difference in value of a ton of billets at Birmingham and the value of a ton of billets at Pittsburgh?

Mr. Young. You mean the price they sell for?

The Chairman. Yes; take the market price; or I will stick to my original proposition. What is the difference in their value?

Mr. Reed. You mean the intrinsic value?

The Chairman. The intrinsic value.

Mr. Bacon. I know what you mean. Chemically they might be the same, but as sold in the market——

The Chairman. I will come to that further on. They are the same in intrinsic value, practically the same thing, as near as two things can be alike?

Mr. Bacon. Yes.

The Chairman. The market price of the Pittsburgh billet is a little greater than the market price of the Birmingham billet?

Mr. Bacon. Yes; that is true.

The Chairman. If you have a carload of basic billets made at Birmingham, and put them in Pittsburgh, and a carload of billets made at Pittsburgh, and put them in Birmingham, then the conditions would be reversed, would they not?

Mr. Bacon. Yes.

The Chairman. So that really the difference in freight rates between Birmingham and Pittsburgh measures the difference in value of these billets?

Mr. Bacon. Yes. In other words, the Pittsburgh makers of billets are closer to the consumer.

The Chairman. That is what I say. It is an advantage in freight rates entirely, and the difference in cost between the product of the two furnaces is the difference in the cost of transportation?

Mr. Bacon. I should say so.

The Chairman. You spoke of having 400 million tons of available ore at the time you were there in 1905, I believe it was.

Mr. Bacon. 1906.

Mr. Reed. May I interrupt just at that point. I do not believe Mr. Bacon understood that last question, as to the difference in cost of making billets in Birmingham and Pittsburgh being exactly equal to the freight rates between Birmingham and Pittsburgh.

Mr. Bacon. The question was this: Given the pig iron—that refers to the open hearth only; you referred to the open-hearth treatment only?

The Chairman. Yes.

Mr. Bacon. The open-hearth treatment in one place would be about the same as in the other.

Mr. Reed. Perhaps I did not understand it myself.

The Chairman. There is a difference in pig iron.

Mr. Bacon. Oh, yes.

The Chairman. But that difference does not attach to the billet or the rail?

Mr. Bacon. No.

The CHAIRMAN. For instance, when you get order for open-hearth rails, you get just as much for the open-hearth rails as they get for the open hearth made at Chicago or Pittsburgh?

Mr. BACON. Yes.

The CHAIRMAN. You spoke of 400 million tons of available ore held by the Tennessee Coal & Iron Co. in 1905 when you were at the head of it. How much ore did you have as reserve ore; how much ore was there that was not available—that is, on account of its low metallic content, but which you held title to? On the other side of Shades Valley, for instance.

Mr. BACON. I do not know that we had any. I think you refer to that bottom seam.

The CHAIRMAN. Yes; Mr. Grasty has spoken the same way. That may have occurred subsequent to that time. That is, silicious ore beyond Shades Valley, farther away.

Mr. BACON. Oh, we do not know anything about that.

The CHAIRMAN. Did you own a large acreage in that region at the time?

Mr. BACON. We owned a large coal acreage.

The CHAIRMAN. Was your coal and ore often in the same land?

Mr. BACON. There may be ore under that land. We never looked for it. That question will not come up for two or three centuries, perhaps.

The CHAIRMAN. At what depth had you made borings in 1905 at the time you speak of?

Mr. BACON. I think something like 2,000 feet deep.

The CHAIRMAN. Since that time they have discovered large quantities of ore there at a depth of 2,000 feet?

Mr. BACON. I do not know.

The CHAIRMAN. Mr. Grasty spoke of finding it.

Mr. BACON. I do not know how deep.

The CHAIRMAN. Are there not veins of ore below this vein of which you speak?

Mr. BACON. Not that I am aware of.

The CHAIRMAN. You made no effort to ascertain? Do you know whether they have since ascertained such a thing?

Mr. BACON. I think they have not.

The CHAIRMAN. How long was it after you severed your connection with the Tennessee Coal & Iron Co. until Mr. Perrin and Mr. Aldrich and these gentlemen made the survey of that country for the Tennessee Coal & Iron, the Republic, and Sloss-Sheffield?

Mr. BACON. That was while I was there.

The CHAIRMAN. That survey was made when you were there?

Mr. REED. In 1904, the record shows.

The CHAIRMAN. Do you know whether or not those men are competent engineers?

Mr. BACON. They are so considered.

The CHAIRMAN. Did you ever go over their report?

Mr. BACON. Yes.

The CHAIRMAN. Do you think it is a reliable report?

Mr. BACON. I think the report as to iron and coal on our own property was safe. I would say that Mr. Aldrich was employed by the Tennessee Co. both for the iron ore and the coal. I do not recall what their figures were, now.

The CHAIRMAN. I do not remember now myself. But speaking from memory their figures as to the red ore and yours are practically the same, as I recall.

Mr. BACON. The figures I gave you this morning on red ore I think are very nearly right.

The CHAIRMAN. But I think they gave a larger holding for the brown ores and for the low-grade ores.

Mr. BACON. I do not know about that.

Mr. REED. Four hundred and twelve million was the figure, as I remember.

The CHAIRMAN. For the available ores. Then they gave three or four million of the other.

Now, you say at the time you were there you allowed yourself a royalty of 5 cents a ton for depreciation charge?

Mr. BACON. Yes; 5 cents a ton on the coal also going into the coke ovens.

Mr. REED. Before you go on with that, on page 1036 of the record is the Perrin report that shows the Tennessee Coal, Iron & Railroad Co.'s ownership of all ore, red and brown, including leased property, is 412,798,500 tons.

The CHAIRMAN. Red and brown?

Mr. REED. Yes.

The CHAIRMAN. There you will find he gives about 400,000,000 for the red ore.

Mr. REED. 402,000,000 for red ore; almost exactly what Mr. Bacon said.

The CHAIRMAN. My memory was correct. I said 400,000,000, and the rest brown ore.

Mr. Gardner, I have just taken Mr. Bacon, after Mr. Young had gotten through with him, over a few questions. Do you care to ask him anything?

Mr. GARDNER. I would like to ask some of the witnesses to-day about the situation with regard to Utah ores and Cuban ores, Canadian ores, and so on. What I want to get at is, either from one witness or a combination of witnesses, what business men think of the ore resources for the steel trade of the United States. Any light that he can throw on that subject would be very valuable to me. I presume that he has to-day testified as to the ores in the Birmingham district principally, have you not?

Mr. BACON. Yes.

Mr. GARDNER. I judged so from what the newspaper men told me. I was at a meeting of another committee this morning, as I told you. Did you testify as to Lake Superior ores?

Mr. BACON. No.

Mr. GARDNER. We are going to hear other witnesses on that.

Mr. YOUNG. Oh, yes.

Mr. GARDNER. Can you tell us anything about other ores in the United States? In a general way, what ore resources are there in the United States that would be commercially available, according to present-day methods of manufacture?

Mr. BACON. I understand. I can not tell you anything that is worth your listening to. You can get other men that are competent.

Mr. GARDNER. Yes.

Mr. Bacon. You would want to find out about the iron ores of Lake Champlain.

Mr. Gardner. I know nothing about what I want to find out. I wanted to find out what ores there were in the North American Continent that could be reasonably useful in the future. As you say, we can probably find one witness who can tell that, one witness who can tell another thing. But it is not so important to get a very accurate statement. What I want to get in my mind is a general view as to the ore resources of the United States.

Mr. Reed. Mr. Cole is pretty well posted on that.

Mr. Bacon. I am hardly competent to answer.

Mr. Gardner. You know nothing about the ores generally outside of the Birmingham ores?

Mr. Bacon. Not definitely.

The Chairman. Do you know anything about the ores in the Appalachian Range?

Mr. Bacon. Very little.

Mr. Gardner. Do you know about other Appalachian ores?

Mr. Bacon. No.

Mr. Gardner (continuing). Except in the Birmingham district?

Mr. Bacon. No.

Mr. Gardner. West Virginia ore?

Mr. Bacon. No.

Mr. Gardner. Then I have not any questions.

I will say that I want to get at it entirely from the point of view, not as criticising anything anybody has done in the past, but I want to find out what we have got to face, what the nation has got to face in the way of the more expensive manufacture of steel, whether it is 30 years hence, 10 years hence, or 50 years hence.

Mr. Reed. We understand.

Mr. Gardner. The evidence so far shows that the high-grade ores are going to be exhausted pretty soon, and that low-grade ores are exceedingly common all over the earth. There is some point in between where, we will say, 45 per cent ore should be used; and that is what I want information about.

Mr. Reed. There is a constant fall in the percentage of mineral content that is necessary to make ore available, and, of course, each per cent that it falls brings in millions of tons of new ore. I think Mr. Cole is pretty well posted on that.

Mr. Young. Do you remember, Mr. Bacon, at the time you were with the Cleveland-Cliffs Co., that what they called first-class iron in those days on an average contained from 65 to 66 per cent iron? That was true of what years?

Mr. Bacon. Well, until 1887, and for several years later. The shipments we made from the Minnesota mine, the highest grade was 66 to 67 per cent, and the lowest we could sell was 62 per cent.

Mr. Young. What do they run now?

Mr. Bacon. From those same mines?

Mr. Young. Yes.

Mr. Bacon. I suppose the same quality, from the same mills.

Mr. Young. I mean from that same district. Do you know what they are now?

Mr. Bacon. I could not tell you nearly as well as Mr. Cole can or Mr. Sellwood.

Mr. YOUNG. Had the percentage gone down before you left there, in 1901?

Mr. BACON. No; very little. As I recall it, we could not sell a 60 per cent ore from the Mesabi Range when I left there.

Mr. YOUNG. The only reason you can not sell it now is because you can not always get it.

The CHAIRMAN. What is the difference in the market price of ore now and in 1904 and 1905?

Mr. BACON. I can not tell you. In 1904 and 1905 I was not selling ore from Lake Superior, and had no connection with mines there; nor have I since.

The CHAIRMAN. You could not form an estimate?

Mr. BACON. Oh, no.

The CHAIRMAN. Whether it has increased in value, or to what extent?

Mr. BACON. Oh, no. Those figures are all available, Mr. Chairman. You can get them.

Mr. REED. Your record on page 306 shows that in 1903 Bessemer ore at the lower Lake ports was worth $4.50, and in 1911 the same price. It fluctuated in between there from $3.25 up to $5.

The CHAIRMAN. There has been all sorts of testimony.

Mr. REED. That is not testimony. That is a table.

The CHAIRMAN. Then, Mr. Reed, there is your Minnesota tax commission, which has run the taxable value of ores up therein the State of Minnesota, I think, from two to three hundred per cent in the last six or eight years.

Mr. YOUNG. They are beginning to get a little nearer the real value up there; that is all.

The CHAIRMAN. It depends entirely on how much a man values the ore. If valued in the ground it is one way, if valued as a leasehold, it is one way, and on a royalty basis it is another. It is an interminable proposition.

Mr. REED. This is not a valuation: It is what the ore was worth at the lower Lake ports at these times.

The CHAIRMAN. Those are sales, and that is as different from the ore in the ground as would be the sales of pig iron. There would be the cost of stripping and transportation, which costs are greater perhaps than the cost of converting that ore into pig iron.

Mr. BARTLETT. I was not here this morning, so did not hear your testimony. You were president of the Tennessee Coal & Iron Co. up to what time?

Mr. BACON. Until 1906.

Mr. BARTLETT. Until 1906?

Mr. BACON. Yes.

Mr. BARTLETT. What time in 1906?

Mr. BACON. Up to the 1st day of May.

Mr. BARTLETT. You were president after the syndicate was formed, by which the stock was bought and put into a syndicate in New York by Mr. Gates and these other gentlemen?

Mr. BACON. Yes.

Mr. BARTLETT. How long since that arrangement had been made did you continue to be president? That was in 1904, was it not?

Mr. BACON. No; I think that purchase was consummated late in the fall of 1905, I should say.

Mr. BARTLETT. And you were president then? And for how long afterwards?

Mr. BACON. Five or six months.

Mr. BARTLETT. Were you president during the time that improvements to the property were being made?

Mr. BACON. No; that was all done, all begun after I left. You mean the improvements of the steel plant?

Mr. BARTLETT. Yes.

Mr. BACON. That was all begun after I left.

Mr. BARTLETT. You were not interested as an officer or as a stockholder either after that time?

Mr. BACON. No.

Mr. BARTLETT. You were familiar with the property and its value up to the time you left or ceased to be president?

Mr. BACON. Yes; reasonably familiar with all of it.

Mr. BARTLETT. Were you familiar with the additions and improvements that were put upon it by these gentlemen?

Mr. BACON. I have been to Birmingham twice since then and looked over the improvements at the steel plant.

Mr. BARTLETT. I am not speaking of the Steel Corporation, but the improvements that were made between the time that you went out, by the men who formed the syndicate, up to the time they sold out to the Steel Corporation in 1907.

Mr. BACON. No.

Mr. BARTLETT. Between those times were you familiar with the improvements that were made by these people? They spent a large amount of money, several million dollars, upon improvements.

Mr. BACON. I was there once during that period and saw what they were doing at the steel plant, but as to the sum of money which they expended I can not say.

Mr. BARTLETT. We know what that is; at least we have been informed what it is.

Mr. BACON. The work was very well done.

Mr. BARTLETT. The property was rendered very much more valuable by reason of these expenditures and those improvements?

Mr. BACON. I think so.

Mr. BARTLETT. Can you tell what sort of improvements they were? Did they put in some new open-hearth furnaces, and things of that sort?

Mr. BACON. They put in two new open-hearth furnaces, of large capacity, as well as to build a building for the necessary gas producers, and had finished rebuilding one of the blast furnaces on which we had begun work before I left.

Mr. BARTLETT. During the time that you were president of it, was it a profitable business?

Mr. BACON. No.

Mr. BARTLETT. It paid no dividends at all?

Mr. BACON. For a short time only.

Mr. BARTLETT. How long before you sold out to the syndicate—I mean of course your people, the people you represented—before the syndicate became the owners of the stock, had the property declared any dividends?

Mr. BACON. I think we had paid two or three dividends. The dividends, as I recall, were quarterly, and I think we had paid two or three such dividends before I left.

Mr. BARTLETT. Before you left during what period?

Mr. BACON. Three quarterly dividends.

Mr. BARTLETT. You mean successive annual dividends, or during what period?

Mr. BACON. I think for the preceding nine months we had paid a dividend—three quarterly dividends, at the rate of 6 per cent a year.

Mr. GARDNER. Out of the profits?

Mr. BACON. Yes.

Mr. YOUNG. If you had charged up the proper amount to depreciation do you think there would have been any profit?

Mr. BACON. Not a dollar.

Mr. BARTLETT. It was a valuable property to those who had the means, the intent and the ability to improve it, was it not a very valuable property?

Mr. BACON. It could be made a very valuable property; yes, sir.

Mr. BARTLETT. By the use of money; and when the people you represent disposed of the interests in it to these gentlemen you disposed of it to gentlemen who were financially able to improve it and to make it valuable, did you not?

Mr. BACON. Yes.

Mr. BARTLETT. And they proceeded to carry out that purpose, did they not?

Mr. BACON. Yes; they did.

Mr. BARTLETT. How valuable a plant is it now?

Mr. BACON. Oh, I do not know.

Mr. BARTLETT. More so than it was in 1907?

Mr. BACON. It should be a great deal more valuable.

Mr. BARTLETT. That is what I meant.

Mr. BACON. There has been a very large sum of money spent on it since that time.

Mr. BARTLETT. Since the Steel Corporation has had it?

Mr. BACON. Oh, yes.

Mr. GARDNER. Did the Gates syndicate put that plant on a profitable basis?

Mr. BACON. No.

Mr. GARDNER. Did they pay a dividend out of earned money?

Mr. BACON. I do not think they paid any dividend.

Mr. GARDNER. I think they did.

Mr. YOUNG. They paid 4 per cent for a little while.

Mr. BACON. Four per cent?

Mr. YOUNG. That is the testimony.

Mr. BACON. I do not think they paid it out of earnings.

Mr. GARDNER. I think they paid it out of the money they were raising.

Mr. BACON. I think so.

Mr. BARTLETT. Do you know that, or is that your opinion?

Mr. BACON. I feel quite sure up to the time they parted with the property they could not make money.

Mr. BARTLETT. By reason of the fact they expended so large amount of money in improvements?

Mr. BACON. The improvements which they had under way had not been completed. The prices of all of their products were low.

Mr. BARTLETT. The stock, as I understand it, was purchased by the Steel Corporation in exchange for its bonds at 119½, I believe it was.

Mr. YOUNG. Figuring the bonds at par.

Mr. BARTLETT. Yes.

Mr. REED. Adding the price of the bonds, which had a market price at the time, they gave par for the stock. That meant on the par of the bonds they gave 119¾.

Mr. GARDNER. It was a cash equivalent of $100.

Mr. REED. A cash equivalent of $100.

Mr. YOUNG. At that time they had thirteen million of stock and fourteen million of indebtedness.

Mr. GARDNER. It was a cash equivalent of $100 a share, paid for in bonds at an agreed valuation of 85.

Mr. REED. That made $119.75.

Mr. GARDNER. $119.75 of market indebtedness. They had a market value of $100 cash. That was the agreed market value, or was the approximate value if you did not have to put it on the market at that time. We have been through it so many times it is not necessary to discuss what happened.

Mr. REED. I was trying to do what you have done, state it concisely, and you have had better success.

Mr. BARTLETT. The stock was 119¾ and the bonds were par. That is the basis of it. That was evidence of a pretty valuable property.

Mr. GARDNER. It seems to me you have not got it right yet. The stock was sold at par, but it was paid for by $119 worth of bonds for each $100.

Mr. BARTLETT. Which bonds were valued at 85 cents.

Mr. GARDNER. Yes; and that makes just $100, you see there.

Mr. BARTLETT. That is what I tried to say.

Mr. GARDNER. But you said $119. What they got was $100 a share.

Mr. BARTLETT. The property was not paying dividends, or had not paid any dividends, and stock that sold at par would be a pretty valuable stock in 1907, would it not?

Mr. BACON. I thought it was a wise purchase for the Steel Corporation to make.

Mr. BARTLETT. You did?

Mr. BACON. Yes.

Mr. BARTLETT. Why?

Mr. BACON. Because it could be made, in my opinion, a good earner. We estimated when I was there it would take $25,000,000 to rehabilitate that property and put it on a paying basis. There was scarcely any of the property that was right, if it was possible for it to be wrong.

Mr. BARTLETT. That estimate you made of putting $25,000,000 on it to put it upon a paying basis—what would you estimate its value then?

Mr. BACON. I think the stock was selling at that time for about $50.

Mr. BARTLETT. At the time you were there?

Mr. BACON. At the time I made that estimate. That would be about $11,000,000 for the stock and the indebtedness. The bonds, I think, were about $12,000,000.

Mr. BARTLETT. With $25,000,000 added, what would be the value of the property?

Mr. BACON. Oh, I could not tell that.

Mr. BARTLETT. But you considered it a wise investment for the Steel Corporation?

Mr. BACON. It seemed so to me.

Mr. BARTLETT. And a judicious one?

Mr. BACON. Yes.

Mr. GARDNER. Is not this the fact, that the great value of that property was what was under the ground, not what had been put by man on top of the ground?

Mr. BACON. Yes.

Mr. GARDNER. And even if you did not have a cent's worth of machinery there, and that practically all you had on top of the ground was worthless, you say that what you had under the ground was worth something?

Mr. BACON. Yes.

Mr. GARDNER. And that was what made your stock worth $50 a share when John Gates bought you out?

Mr. BACON. Yes.

Mr. GARDNER. That is about what you sold out for, was it not?

Mr. BACON. He had bought some of it about 55 and ran it from there up to more than 100.

Mr. GARDNER. Between 55 and 100?

Mr. BACON. Yes.

Mr. GARDNER. Do you remember up to the time he sold out to the Steel Corporation, taking the amount of money that had been actually called for the new issues of stock, how much did that amount to each share of stock? How much actual cash had been put in per share of stock between the time when you sold out to Gates and his people and the time that Gates and his people sold out to the Steel Corporation? How much a share had gone in?

Mr. BACON. I have been told by people who were conversant with the matter that they had put in 7,000,000.

Mr. GARDNER. How much did that figure per share?

Mr. BACON. That would be adding the 7,000,000 to the 23,000,000 of stock. That was bought at about a third.

Mr. GARDNER. About $30 a share?

Mr. BACON. Yes, sir.

Mr. GARDNER. As a matter of fact, we have had a lot of testimony on that, and it seems to me there was more than that had been called, and less than that had been paid in. You do not remember the figures?

Mr. BACON. No; I do not know that. I can not testify on that point.

Mr. GARDNER. I can not either.

Mr. YOUNG. It was not far from that that was paid in—a little less, perhaps.

Mr. BACON. You can say that the real value of the Tennessee property at the time I went there and up until the time that Gates bought it was what was under ground, because there were very few things on the surface that could do their work as cheaply as was being done at other properties.

Mr. Bartlett. Other properties in the Birmingham district?

Mr. Bacon. No; I mean outside.

Mr. Bartlett. Take, for instance, some place where the question of freights——

Mr. Bacon (interposing). I do not mean that at all. I mean we had some 15 furnaces, and at only one of those, when I left there, could cheap pig iron be made—could the pig iron be made at a fair cost. Only two or three of our coal mines were properly equipped to produce cheap coal. Our coke ovens were not of the best, and only a few of our iron mines were so equipped that we could mine iron ore cheaply. When I say cheap, I mean comparing it with other up-to-date districts.

Mr. Bartlett. Are you comparing the Tennessee with the Republic and the other companies that operated in the Birmingham district?

Mr. Bacon. No.

Mr. Bartlett. Were you further behind than they were—than the Woodward, for instance?

Mr. Bacon. In many respects we were not behind the Woodward, but I am comparing them with like properties in the North.

Mr. Bartlett. You say the value was all underground, or chiefly underground?

Mr. Bacon. Chiefly; yes.

Mr. Bartlett. Was the chief value also the accessibility of the materials necessary to combine with the ore, as well as the ore itself, in order to make iron products?

Mr. Bacon. I testified to that a little while ago.

Mr. Bartlett. I am sorry I was not here to hear you.

Mr. Bacon. I testified that the advantage that district had as to the low cost of pig iron was the proximity of the coal and the ore to each other—the low cost at which they could be assembled.

Mr. Bartlett. That made it possible, with proper machinery and proper furnaces and proper appliances erected there, to enable them to produce pig iron or iron cheaper than they could elsewhere?

Mr. Bacon. I think so.

Mr. Bartlett. Could you give us any idea of comparison with Pittsburgh or other places?

Mr. Bacon. I do not know the cost at Pittsburgh or any places in the north, but we thought that if we had a good furnace down there we could make pig iron under $8 per ton; perhaps as low as $7.

Mr. Bartlett. That would enable you to compete with Pittsburgh, would it, in what territory?

Mr. Bacon. As I recall, the freight rate was $3.50 to Pittsburgh. There would not be much left to the company. The only way we could see for the company to make money was to put the pig iron into some higher product, like steel rails.

Mr. Bartlett. Could you make them as cheap or cheaper than they could at Pittsburgh?

Mr. Bacon. With a given mill we would do as well.

Mr. Bartlett. Did you do it while you were there?

Mr. Bacon. No.

Mr. Bartlett. You did not make rails at all while you were there?

Mr. Bacon. Oh, yes; we made two or three hundred thousand tons of rails while I was there.

Mr. BARTLETT. Did you find a ready sale for them?

Mr. BACON. Oh, yes.

Mr. YOUNG. Did you make any money on them?

Mr. BACON. No.

Mr. BARTLETT. What was the reason for the failure of the mill to be profitable while you were connected with it?

Mr. BACON. In the first place, the pig iron was not made as cheaply as it could have been made with better furnaces, and the open-hearth furnaces were of indifferent design and construction, so that to change the pig iron from pig iron to steel cost an excessive sum. To get out of the pig iron phosphorus, which we had to remove, cost an excessive sum in the open-hearth furnaces we had.

The CHAIRMAN. Did you make this iron into pigs and then convert the pigs—remelt the pigs——

Mr. BACON. No.

The CHAIRMAN (continuing). Or did you handle the hot metal?

Mr. BACON. The hot metal.

Mr. BARTLETT. You say you have not visited the mills very recently, since the Steel Company had them—or only once?

Mr. BACON. I have been there once since the Steel Company had them.

Mr. BARTLETT. Did you make any investigation?

Mr. BACON. No; I made no investigation. I went down just for a pleasant visit.

Mr. BARTLETT. Do you consider this property was worth all the Steel Corporation paid for it?

Mr. BACON. I would not say that. I think if the stock had been thrown on the market it would have sold at $40; maybe $30.

Mr. BARTLETT. Yes; at that time; probably. But it was a wise investment for the company?

Mr. BACON. I would say this, though, as against my opinion, that some of the directors, who are my superiors in their knowledge of the business, have not been favorable to the purchase.

The CHAIRMAN. You mean some of the directors of the Steel Corporation?

Mr. BACON. So I am told. They doubted the wisdom of it as a money maker—doubted the wisdom of the purchase.

The CHAIRMAN. Mr. Bacon, is steel made in any great quantities anywhere else in the south than at Birmingham?

Mr. BACON. I think nowhere, directly.

The CHAIRMAN. Sir?

Mr. BACON. I think nowhere is pig iron made into steel except by the Tennessee Co.

The CHAIRMAN. How do you account for the fact that at this point alone they make steel profitably? There is iron ore, as I understand, all through that region in considerable quantities, in Tennessee, in Virginia, in Georgia, and up into New York. That whole mountain range there is permeated by iron-ore deposits of greater or less thickness and richness, is it not?

Mr. BACON. Yes. The Tennessee Co. seems to have been the only one that had the nerve to begin the manufacture of steel.

The CHAIRMAN. Even in that region?

Mr. BACON. Yes.

The CHAIRMAN. How do you account for the fact they manufacture it there and not, for instance, where they have blast furnaces, as I understand, up near Big Stone Gap, in Tennessee, and in blast furnaces in Virginia? I believe, also, there are some blast furnaces in Georgia. Is there any advantage in that Birmingham district we hear so much about?

Mr. BACON. I would say that perhaps Birmingham is the only point at which there is a large enough body of ore known to warrant the putting in the money required for a steel plant.

The CHAIRMAN. Mr. Perrin said something about the ore being thicker and occurring in more reliable formation.

Mr. BACON. Yes.

The CHAIRMAN. That there were fewer faults in it, and that it did not feather out as it did in other places. Do you know anything about that?

Mr. BACON. Yes; I know in a general way that is true. The deposits at Birmingham—or at least the Red Mountain deposit—is very regular and uniform, both as to thickness and quality.

The CHAIRMAN. Do you know of any other deposit of red ore like it in that respect in the South?

Mr. BACON. No. As you follow up the mountain range the ore gets thinner and is more broken.

The CHAIRMAN. Have you the same propinquity of large bodies of coke and coal outside of there?

Mr. BACON. I should say no, except it might be in the neighborhood of the coking coal mines of western Virginia.

The CHAIRMAN. Have you similar railroad and transportation facilities anywhere else?

Mr. BACON. That ought to be a little more favorable up there, being nearer to the consuming points. The consuming points for pig iron are practically all in the North.

The CHAIRMAN. I see.

Mr. BACON. Stove factories are big consumers.

The CHAIRMAN. The South has not developed these large manufacturing industries yet, outside of cotton?

Mr. BACON. Yes; and some pipe enterprises at Birmingham.

Mr. BARTLETT. You are mistaken about the lack of development in the South. There are a good many things outside of cotton factories.

The CHAIRMAN. I mean to the extent that the manufacture of cotton has been developed.

Now, you say you traced this ore to Shades Mountain. Who owns that ridge now; who has the title to the land? Do you know?

Mr. BACON. Shades Mountain, do you mean?

The CHAIRMAN. Yes.

Mr. BACON. Oh, a variety of owners, I think.

The CHAIRMAN. You spoke of owning ore bodies that ran to the foot of the mountain, and at that time the Tennessee Coal & Iron Co.'s title only went practically to the mountain. That bounded the site of their ore holdings?

Mr. BACON. Yes.

The CHAIRMAN. Do you know whether they have extended their holdings over the mountain since—beyond the mountain?

Mr. BACON. Only from looking at the map recently, the map prepared by the Tennessee Co., and that did not show ownership immediately beyond the mountain. Mr. Reed, is not the Coosa coal district away beyond that?

Mr. REED. I am not sure, exactly.

Mr. BACON. It may own land away beyond that was bought for coal.

The CHAIRMAN. Do you know to what extent the Tennessee Coal & Iron Co.—approximately, of course—ever increased their coal and iron holdings since you severed your connection with it?

Mr. BACON. Yes; they bought a half interest in 1,100 acres of of land, and I think that that is about all that they have added to their holdings.

The CHAIRMAN. Is that coal or iron?

Mr. BACON. That is iron. When the Republic people were in charge they bought it, one-half for the Republic and one-half for the Tennessee Co.

The CHAIRMAN. What was the acreage tonnage?

Mr. BACON. I do not know.

The CHAIRMAN. Was it red ore?

Mr. BACON. It was red ore. The question did not come up while I was there.

Mr. REED. It runs about 50,000 tons to the acre.

Mr. BACON. About that. From 43,000 to 50,000.

The CHAIRMAN. To what extent is the ore in that Birmingham district held by iron and steel manufacturing concerns of one kind or another?

Mr. BACON. I doubt if more than half of it is held. Perhaps a little more than half. As I testified this morning, the Tennessee Co. owns in Shades Valley between 30 and 33 per cent of the land, and the other iron companies own some, but a great deal of the land is owned by individuals, farmers.

The CHAIRMAN. Do you know or have you ever made any careful examination, either of the maps or reports, to see to what extent available ore bodies are now held by individuals, and to what extent they have parted with their mineral rights?

Mr. BACON. Sold the ore and retained the surface, you mean?

The CHAIRMAN. Yes.

Mr. BACON. I do not know of any cases where the ore has been sold and the surface retained. As I said a few minutes ago, perhaps the iron companies own in Shades Valley a half or more, possibly two-thirds. Your map will show, Mr. Reed.

Mr. REED. About two-thirds, I think; something less than two-thirds.

The CHAIRMAN. It depends on the map and the mapper. We get all sorts of estimates.

Mr. REED. You can not change the ownership of land by making a map of it.

The CHAIRMAN. No; but the estimates of the amount that is held varies very greatly here. For instance, I remember Mr. Grasty thought maybe there was from 33 to 35 per cent held by individuals, and Mr. Perrin thought not over 5.

Mr. BACON. Your map will show it correctly.

Mr. GARDNER. I suppose these statements could be reconciled if we could put metes and bounds and get the evidence all on the same metes and bounds, then specify what percentage of metallic content and what kind of ores we are speaking about.

Most of the divergence, as far as I have observed it in the evidence, has arisen from the fact that different people bound the Birmingham district different ways, and different people in estimating the amount of ores, some are talking about ores which exceed 50 per cent, some are talking about ores which exceed 45 per cent; some include red ores, some include red and brown ores, and some include red, brown, and gray, is it?

Mr. BACON. Yes; there is a gray ore.

Mr. YOUNG. Gray ores are not in that district.

Mr. GARDNER. If we can draw a map and specify just what we want to find out, I fancy we can get the same evidence from different witnesses.

Mr. REED. Mr. Bacon defined it pretty well when he said he took a district 15 miles in length, running from the northeast to the southwest, and extending from Red Mountain to Shades Mountain. He defined that district quite clearly.

Mr. GARDNER. Suppose some other people took a district which extended a different number of miles.

The CHAIRMAN. Take that railroad district we have seen in quite a number of maps here, with concentric circles, taking Birmingham as the center, and within a radius of 200 miles they charge a flat rate for hauling ore and coal.

Mr. BACON. Yes.

The CHAIRMAN. Taking that circle, roughly speaking.

Mr. BACON. That would not include as much iron ore as I have included, except they took one of the outside circles.

The CHAIRMAN. Now, Mr. Bacon, if you were going to operate a large steel plant, one that could compete with the Tennessee Coal & Iron, and some of these other companies, how much ore would you consider was necessary as a reserve before embarking on that sort of an enterprise?

Mr. BACON. I am to put up a steel plant, am I?

The CHAIRMAN. Yes.

Mr. BACON. And blast furnaces?

The CHAIRMAN. Yes.

Mr. BACON. And open coal mines?

The CHAIRMAN. Yes.

Mr. BACON. And then iron mines?

The CHAIRMAN. Consider a concern—I do not say as large as the Tennessee Coal & Iron, but one that could compete with it in the market. You want it to be a growing concern, for years to come. I am going on the theory now with a perfectly integrated plant you are obliged to have your own ores; you can not buy your ores from somebody else who is also in the business.

Mr. GARDNER. And make steel rails.

The CHAIRMAN. And make steel rails, wire, and everything of that sort. How much ore would you want as a basis for going into that business?

Mr. BACON. A steel plant that could meet competition fairly well ought to produce at least 50,000 tons a month. In order to cost him down fairly well, that would mean, calling 3 tons roughly of ore to a ton of pig iron, 72,000,000 tons of ore to run 40 years.

The CHAIRMAN. Seventy-two million tons of ore to run 40 years?

Mr. BACON. I think so. That is only 40 years. That is not very long to figure.

Mr. YOUNG. You ought to have a hundred millions, ought you not?

Mr. BACON. Yes; and a hundred millions would be good for only 50 years.

Mr. GARDNER. Could you make steel rails profitably without having a larger mill than that?

Mr. BACON. Oh, I think if everything was in good shape, 50,000 tons a month would be sufficient.

Mr. GARDNER. How much would a steel mill cost?

Mr. BACON. I do not know.

Mr. GARDNER. We have evidence it would cost $25,000,000.

Mr. YOUNG. The size of the mill was not specified.

Mr. GARDNER. It was an open-hearth plant. I was wondering whether a $25,000,000 plant would not produce more than 50,000 tons of steel a month.

Mr. BACON. Fifty thousand tons of steel a month means about 1,600 tons a day.

The CHAIRMAN. Could one of these furnaces down there produce that?

Mr. BACON. In that district it could not be done.

The CHAIRMAN. Is 500 a good average?

Mr. BACON. Four hundred tons is more than they get down there.

Mr. GARDNER. Seventy-two million tons is a 40-year supply. Is that a sufficient reserve to induce you to go into the business?

Mr. BACON. No.

Mr. GARDNER. How much or how large a supply would you want?

Mr. BACON. I would want ore there for 100 years. Because out of that 40 years I would have to get my capital back.

Mr. GARDNER. How much would you want for 100 years?

Mr. BACON. How much would that make?

Mr. GARDNER. Yes.

Mr. BACON. Divide 72 by 4 and multiply by 10, and you will have it.

Mr. GARDNER. That is on the basis of your using 50,000 tons of ore a month?

Mr. REED. One hundred and fifty thousand tons of ore a month, to make 50,000 tons of iron. That is 1,800,000 tons a year and 180,000,000 tons for 100 years.

Mr. GARDNER. Where would you get 180,000,000 tons of Southern ore? In the first place, what per cent of metallic content would that have to have?

Mr. BACON. I am calling 3 tons of ore to a ton of pig iron. It would run a little better than that.

Mr. GARDNER. That would be what per cent?

Mr. BACON. That would be 33 per cent, and Birmingham ore is 36 per cent. It would be a little less than 33 per cent. Birmingham red ore is 36 per cent.

Mr. GARDNER. I understand; yes. Where could you get it?

Mr. BACON. Of course, that could be found down there.

Mr. GARDNER. Can you find it in the Lake Superior region?

Mr. BACON. I think you can find it in Birmingham.

Mr. GARDNER. You can find it in Birmingham?

Mr. BACON. I think so.

Mr. Gardner. In convenient situation, where a business man would want it?

Mr. Bacon. The same as other people are working.

Mr. Gardner. That is, not a piece here and there, but all together.

Mr. Bacon. All in one body.

Mr. Gardner. Could you find it in the Lake Superior region?

Mr. Bacon. I think so.

Mr. Gardner. Whereabouts?

Mr. Bacon. On the Hill leases, doubtless.

Mr. Gardner. Oh, yes. But outside of the Hill leases I mean.

Mr. Bacon. I do not know. Mr. Sellwood can testify on that point much better than I can.

Mr. Gardner. There is one question I would like to ask each one of you three witnesses before you go. It has no bearing really on the question of whether the Steel Corporation and these other steel companies have a monopoly. But it is a question of what the world has got to face in the future.

I understand that in the Lake Superior region there is plenty of 20 and 40 per cent ore; that is, the whole surface of the ground is cheap ores. Is that correct?

Mr. Bacon. There is a great deal of ore there that could not be shipped to market now.

Mr. Gardner. Is there an unlimited amount of ore in the Lake Superior region—I mean good for a couple of hundred years, if you could use that 40 per cent ore?

Mr. Bacon. Well, for a good many years. I would not say for 200.

The Chairman. I think, Mr. Gardner, you are laboring under a misapprehension there. My understanding is that the low-grade ore and the high-grade ore are all in the same mine, and that the ore as discovered, low and high grade, is now in the hands of the Steel concern. They simply take out some of it and leave the rest.

Mr. Gardner. Very likely that is true. I am not coming at it from the question of competition and monopoly. It does not make any difference who owns it.

The Chairman. Oh, I see. You are getting at the question of supply.

Mr. Gardner. At present about 55 per cent is what they usually use, in the Bessemer ore?

Mr. Bacon. I presume that it as high as the average would be now.

Mr. Gardner. Suppose they had to use 40 per cent; suppose the other was worked out; would it cost twice as much to make a ton of pig iron out of 40 per cent ore as it would cost to make it out of 55 per cent ore?

Mr. Bacon. I should say not. Now, bearing on that point, inventors are all the time perfecting machines for separating the iron from the silica, by crushing it, you see.

Mr. Gardner. Yes.

Mr. Bacon. And an ore that was not useful, an ore the use of which would mean a loss to a blast furnace a few years ago, can now be used.

Mr. Gardner. That I understand.

Mr. Bacon. And an ore which to-day would mean a loss I have no doubt in a few years will be used at a profit.

Mr. Gardner. I understand that.

Mr. BACON. And that enlarges all the time the ore that we have in reserve.

Mr. GARDNER. All right. We can make allowances for that. But I want first to find out if it happened to-day, with present methods, how much more it would cost to produce a ton of pig iron from 40 per cent ore than it would to produce a ton of pig iron from 55 per cent ore.

Mr. BACON. I can not tell you.

Mr. GARDNER. Would it cost 50 per cent more?

Mr. BACON. No; I should hardly say so. It might cost 25 per cent more. It means so much more coke and a little more limestone.

Mr. GARDNER. It would cost 25 per cent more?

Mr. BACON. Yes; you are speaking of the blast furnace itself, or of assembling the material?

Mr. GARDNER. What I want to get at is what the world has got to look forward to in the ultimate cost of steel. Now, if we are going into the range of speculation, of future inventions, we have got no solid ground to start on. I am saying supposing there are no future inventions, but that to-day the United States Steel Corporation suddenly found that they have got to take from their mines and bring down to wherever their blast furnaces are 40 per cent ore instead of 55 per cent ore, how much, in your opinion, more would it cost to produce a ton of pig iron?

Mr. BACON. I think my opinion is quite valueless.

Mr. GARDNER. But you estimated a little while ago a quarter as much again.

Mr. BACON. Well, I think I had better retract that.

Mr. GARDNER. Would it be half as much again?

Mr. BACON. You need a furnace man. First, you must know what takes the place of the decreased iron. If it is lime, it is one thing, if it is silica, it is another thing. Then there is the freight to consider. We must know the district from which the freight is coming.

Mr. GARDNER. I realize the great difficulty of making any close estimate, but you can easily see that in considering a problem like this, if gentlemen like you do not help us where you can, we are very much at sea. People say to me, "Why, the whole world, and America especially, is up against the proposition that in 50 years we are going to have very expensive steel and iron because the 55 per cent ore of Lake Superior, the Bessemer ores, are all going to be exhausted in 40 years at the present rate of use." "Yes," somebody else says, "but there is plenty of ore nearly as good as that coming along."

I want what light you can throw on that, to show what truth there is in these two different positions.

Mr. BACON. I would be very glad to tell you anything I know, but I am quite incompetent to answer that.

Mr. GARDNER. I realize that not knowing what questions to ask you I am fishing at random. But we will put it in this way then: Supposing that the freight were the same on 40 per cent ore that it is on 55 per cent ore from the Mesabi Range to the blast furnaces in Pennsylvania; supposing that the ore was siliceous, if I am getting the technical term right.

Mr. BACON. You are right.

Mr. **Gardner**. Supposing there is no change in the facilities for obtaining coke and coal, and fluxing material, if I am getting those technical words right.

Mr. **Bacon**. You are right again.

Mr. **Gardner**. In your opinion what would be the extra cost to the United States Steel Corporation, in those particular blast furnaces, of making a ton of pig iron from 40 per cent ore than the cost would be in making it out of 55 per cent ore?

That is as near as I can put the question and express what has been working in my mind, and what really we want you gentlemen here for.

Mr. **Bacon**. I will just have to guess at an answer.

Mr. **Gardner**. That is just what I want.

Mr. **Bacon**. But I do not think that answer is of any value at all.

Mr. **Gardner**. Make it a guess, as a matter of record.

Mr. **Bacon**. I want the stenographer to put it down that it is simply a guess. Say, 30 per cent.

Mr. **Gardner**. It would cost 30 per cent more. Have you any idea what the 40 per cent ore reserves of Lake Superior are?

Mr. **Bacon**. None whatever.

Mr. **Gardner**. That is in the report of the Geological Survey, is it not?

Mr. **Young**. They go down to 35 per cent—75 billion tons.

Mr. **Gardner**. Now, I am going to ask Mr. Bacon the question that he has just answered. Comparing 40 per cent ores with 55 per cent ores, how much more would it cost if instead of being 40 per cent ore it would be 35 per cent ore?

Mr. **Bacon**. You can guess the answer as well as I can.

Mr. **Gardner**. That is, it would be about a third more.

Mr. **Bacon**. It ought to be about a third. We have come from 40 to 35?

Mr. **Gardner**. Yes. A moment ago you said about 30 per cent. Perhaps this would be 35.

Mr. **Bacon**. Call it 35. Those guesses have no value, none whatever. It is just for somebody to smile at later, when they read it.

Mr. **Gardner**. Very likely. But there might be an immense amount of contradiction; if we can not get information from you, who can we get information from?

Mr. **Bacon**. You can get it from some furnace man.

Mr. **Gardner**. But everybody who comes here tells us somebody else is the man who knows.

Mr. **Bacon**. You have subpœnaed a furnace man, who can tell you.

Mr. **Gardner**. I am going to ask him the same questions, too.

Mr. **Bacon**. You put those questions to Mr. James Gayley, and he will tell you.

Mr. **Gardner**. I am quite sure he will say, "Now, that is what you ought to have asked Mr. Bacon." [Laughter.]

But here is a tremendous question, the situation as to ores, no matter who owns them, no matter if Uncle Sam takes over all the ore countries and ore properties, and says, "I own them." Then the proposition is still that Uncle Sam could not put any ore in the ground simply because he owns it. What I am trying to get through my mind is whether it is true that we have got to face expensive steel in the future on account of limited ore delivery.

Mr. Bacon. You and I will not have to.

Mr. Gardner. That is probably true, but remember that when we make our report, we are making it to be read by the great-grandchildren of another generation.

Mr. Reed. That would be pretty tough on our great-grandchildren.

Mr. Young. I would like to prophesy that they will make steel cheaper a hundred years from now than they do at the present time.

Mr. Gardner. That is your view?

Mr. Bacon. Reasoning from what has passed, that would be true.

Mr. Young. Right along that line, Mr. Gardner has made certain conditions on which this prophecy is based—that is, if certain things were true, if the transportation costs are the same. Have you any idea that there will not be improvements that will reduce the cost of transportation within the next 25 years, the transportation on the Lakes, for instance?

Mr. Bacon. I believe there will be.

Mr. Young. Is it not true that ever since the beginning of the iron and steel industry transportation has been going down?

Mr. Bacon. Yes.

Mr. Young. And methods of manufacture have been improving from the very beginning?

Mr. Bacon. Yes.

Mr. Young. Have you any reason to think we have come to the end of the process where nothing else is going to be learned about this business?

Mr. Bacon. No.

Mr. Young. That is all.

The Chairman. You spoke of the necessity for 170,000,000 tons of iron ore as a reserve for the establishment of a modern plant, say in the Birmingham district, and you thought that amount of ore could be obtained. Do you know of any such ore body as that now in the Birmingham district in proximity to coal and transportation facilities, if it is all in one body to be availably mined?

Mr. Bacon. I would say in the northeast end of that Shades Valley, northeast of the ore that is owned by the furnace companies, there must be that quantity and a great deal more than that.

The Chairman. Is that a red ore?

Mr. Bacon. Yes.

The Chairman. And transportation facilities are close?

Mr. Bacon. Yes.

The Chairman. Has that ore ever been drilled?

Mr. Bacon. No.

The Chairman. It is your opinion that there is ore there?

Mr. Bacon. Yes.

The Chairman. You think it is there because that prism has been found in that neighborhood?

Mr. Bacon. Yes.

The Chairman. Do you know of any drills that have been sunk in that region?

Mr. Bacon. No.

The Chairman. Did you ever make any careful survey of that region?

Mr. Bacon. No.

The CHAIRMAN. Do you know who owns that property at this time north of Shades Valley?

Mr. BACON. No.

The CHAIRMAN. Do you know whether within the last four or five or six years the Woodward Iron Co. and other iron companies have extended their ore holdings in this prism of red ore?

Mr. BACON. I have seen a map recently on which the holdings of the Woodward Iron Co. are marked, and none of those holdings are in the territory I have in mind. Have you got your map here?

Mr. REED. No; I have not.

Mr. BACON. Mr. Reed has a map of that country I refer to.

Mr. REED. The Woodward iron holdings it has purchased were all in the southern end of the district that Mr. Bacon has been speaking of.

Mr. BACON. I can say further, Mr. Chairman, that the southern extremity of that ore deposit is not fully known yet.

The CHAIRMAN. I am speaking of known, available, located ore. Do you know of any ore that is now drilled, where they own the ore that is there, that is available in any such quantity as that?

Mr. BACON. No.

The CHAIRMAN. Then if the 170,000,000 tons of ore is to be found in that region, it has to be discovered?

Mr. BACON. Except that the outcrop is now known.

The CHAIRMAN. There are indications of such ores; you may have the outcrop without having the ore in any great quantities, might you not?

Mr. BACON. It is possible, of course, but not at all probable in that region.

The CHAIRMAN. It has been stated here by Mr. Perrin, I think, and others, that as to the red ore in so far as it has been located, the seam or vein is uniform in thickness and contains an iron content sufficient to make it available, and that it has been taken up by these various companies, so far as discovered. Now, do you know anything about any ore which they would have covered by their investigation?

Mr. BACON. The valley in which the operating mines are located extends for a long distance beyond the land that is owned by the operating companies, and I believe the ore is in there. There are almost infallible indications that it is there.

The CHAIRMAN. This ore you spoke of is plainly visible, it is not; this outcrop? Now, Mr. Grasty, of the University of Virginia, has testified that he went into that region comparatively recently—I forget the exact date—for the purpose of securing red ores to mix with silicious ore. His people had large holdings of gray silicious ores, and he said it could not be economically smelted without an admixture with the red ore. Is that true; is that your experience?

Mr. BACON. Did he say gray ore?

The CHAIRMAN. Yes.

Mr. BACON. I never used any of it.

The CHAIRMAN. He said the purely silicious ore could not be chemically smelted without some more or less of the lime in it, and that he made a very careful search and found that the purchases of the holdings of the red ore were such that while he could find two or three hundred thousand tons or three million tons, perhaps, here a part and there a little and yonder a little, that he could not find a sufficient quantity now in one body to justify him in advising the persons employing him to make the purchase. Could those purchases have been made in the last three or four or five years without your knowledge? How long has it been since you made an investigation?

Mr. BACON. I was merely familiar with that district up to 1906.

The CHAIRMAN. If that ore has been since purchased or leased by other companies, you know nothing about it?

Mr. BACON. No.

The CHAIRMAN. That might have been done, might it not, without your knowledge?

Mr. REED. The evidence shows that the Republic Co. took options on 50,000,000 tons last year. Mr. Grasty could not have known about that.

The CHAIRMAN. I say, this ore could have been taken up by various companies since 1906 without your knowledge?

Mr. BACON. Oh, in some other name, but it does not appear under their ownership.

The CHAIRMAN. Have you been directly financially interested in those ore holdings since you severed your connection with the company in 1906?

Mr. BACON. Not at all.

The CHAIRMAN. Where have you been making your home since that time?

Mr. BACON. In New York.

The CHAIRMAN. This red ore to be mined must be mined by a shaft, after you leave the drill, must it not?

Mr. BACON. It is an inclined shaft following the direction of the ore.

The CHAIRMAN. In mining that ore, after you have followed the drift for a certain distance, then you have to revert to shaft mining?

Mr. BACON. Perhaps, after five or six thousand feet is reached, it might be better.

The CHAIRMAN. If this ore is located in small holdings, say a million tons here, ten million tons there and twenty million tons yonder, it would not be available, would it?

Mr. BACON. No.

The CHAIRMAN. For practical purposes.

Mr. BACON. No.

The CHAIRMAN. It would have to be in one continuous body to be economically mined?

Mr. BACON. Oh, not contiguous, but so that the different pieces could be mined from a comparatively small number of shafts.

The CHAIRMAN. You could not afford to sink shafts in, say, 10 different holdings?

Mr. BACON. No.

Mr. DANFORTH. How deep do they ever run those shafts?

Mr. BACON. I think the Tennessee Co. has sunk a shaft something like 2,300 feet, on an incline.

Mr. DANFORTH. No; vertical.

Mr. BACON. Vertical shafts have been sunk to a depth of 5,000 feet.

Mr. DANFORTH. In Birmingham?

Mr. BACON. No; there is a shaft in the copper mines.

Mr. DANFORTH. I mean in the Birmingham district.

Mr. BACON. There has been no vertical shafts.

Mr. DANFORTH. What is the slope?

Mr. BACON. Two thousand three hundred feet is the deepest.

Mr. DANFORTH. Then what you call shafts are really slopes; they go in from surrounding the outcrop, and then slope down?

Mr. BACON. They go down at an angle; start from the surface and go down at an angle.

Mr. DANFORTH. Down the side of a hill?

Mr. BACON. Yes.

Mr. DANFORTH. Or slope downward?

Mr. BACON. Yes.

Mr. DANFORTH. Do you mean that the lower end of the slope of the shaft is 2,300 feet from the upper end?

Mr. BACON. Two thousand three hundred feet in distance; but not a vertical distance.

Mr. DANFORTH. What is the vertical distance?

Mr. BACON. About 600 feet.

Mr. DANFORTH. And that is as deep as any shaft you know of?

Mr. BACON. As deep as any there.

Mr. DANFORTH. Can a shaft be made deeper than that economically?

Mr. BACON. They are running more than 6,500 feet at one of the copper mines in the Lake Superior district.

Mr. DANFORTH. Yes; I know about that. But about this Birmingham district; would it be economical operation to make the shaft deeper?

Mr. BACON. Oh, Yes.

Mr. DANFORTH. It would not cost them any more to operate the iron ore bed, the mine?

Mr. BACON. Not enough to show on the cost sheet, because as I say there are always improvements one way and another that offset the increased cost.

Mr. DANFORTH. That was one of the objections that Mr. Grasty had to these separated bits of ore, or ore mines, you might call them, that it would require much longer and deeper shafts to reach them than he considered economical operation.

Mr. BACON. What was in his mind was there would have been only a comparatively few tons tributary to each shaft.

Mr. DANFORTH. But in this district you speak of northeast from Birmingham, you think there is an adequate amount of iron ore.

Mr. BACON. Oh, I think so.

Mr. DANFORTH. In one body that could be reached?

Mr. BACON. I think so. It would have to be acquired from different people who own the surface, just as the land of the Tennessee Co. was acquired.

Mr. DANFORTH. Is it owned by individuals?

Mr. BACON. By farmers generally.

Mr. DANFORTH. And, so far as you know, not owned by the different mills?

Mr. BACON. No.

Mr. DANFORTH. Or companies?

Mr. BACON. No.

Mr. DANFORTH. Steel companies?

Mr. BACON. No.

Mr. YOUNG. Mr. Grasty stated his limit of price was about 2 cents a ton. He said his people might have gone to 3 cents a ton.

Mr. BACON. For the fee?

Mr. YOUNG. Yes; 2 cents a ton on the estimated ore. Do you think that might have had something to do with the difficulty in getting it?

Mr. BACON. That is more than anybody has paid up to this time, so far as I know.

Mr. BARTLETT. You say that is more?

Mr. BACON. It is more; yes.

Mr. BARTLETT. Then his price was a fair price, was it, that he offered?

Mr. BACON. It is more than was paid while I was there.

The CHAIRMAN. Well, he testified that he never made an offer of 2 or 3 cents, but that he was authorized to offer it, and he never could find a body of ore of sufficient size in one contiguous block to justify him even buying enough iron ore to mix with the other; that these companies had bought alternate sections in the last six years, since 1905, I think, and in such a way as to leave the ores there now in small holdings.

Mr. DANFORTH. What he testified was that he offered as high as $500. At page 5305 of the record Mr. Gasty says, "I can say that the land in there was valued and held at anywhere from $500 an acre up to $1,000 an acre." Mr. Young was examining him. Then, at the top of the next page, he says, in answer to Mr. Reed, that $500 an acre is not as much as 3 cents a ton. I can not find anywhere where he says he offered $500.

The CHAIRMAN. I did not say he did. I stated he was authorized to offer that, but could not find the property.

Mr. DANFORTH. Neither do I find anywhere these alternate sections were divided up.

The CHAIRMAN. He said they were held in small sections.

Mr. BARTLETT. He says, "They would have been willing, if they could have gotten property which was situated properly and there was sufficient tonnage on it to have paid that much if the ore was a good, high grade."

Mr. DANFORTH. Where is that?

Mr. BARTLETT. Just below where you were reading, on page 5306.

Mr. REED. The record shows the Woodward Co. bought 125,000,000 tons last year, and the Republic Co. got options on 50,000,000 more. It is evident that Mr. Gasty could not have looked very hard.

The CHAIRMAN. That might be true, in view of Mr. Grasty's testimony. My impression is Mr. Grasty made the statement on the stand—I know he explained it to me fully—that the companies now there can buy vast holdings, because they already have holdings stretching all over that whole region, and they can take in 10 acres or 20,000 tons, a little patch adjacent to them anywhere. But the man who has no holdings at all can not go into that checker-boarded section and buy a large contiguous body of ore.

Mr. REED. As I remember the testimony, it was that this Woodward purchase of 125,000,000 tons was practically in one solid block.

The CHAIRMAN. There is no testimony in this record to that effect.

Mr. REED. Somebody testified to that. I do not remember where it is.

Mr. Gardner. What is that?

Mr. Reed. About the purchase by the Woodward Co. of a very large tonnage of ore in Shades Valley last year.

The Chairman. There is nothing in this record.

Mr. Danforth. Perhaps it was when this investigation began that that testimony appeared.

Mr. Young. It may have been while we were in New York.

Mr. Gardner. How long ago was that?

Mr. Reed. I do not remember. I have it very clearly in my mind.

The Chairman. Does anybody care to ask Mr. Bacon anything further? If not, we will excuse you, Mr. Bacon. We are very grateful to you for your attendance.

STATEMENT OF JOSEPH SELLWOOD.

The witness was sworn by the chairman.

Mr. Young. Mr. Sellwood, what was your first experience in and about mines, and when?

Mr. Sellwood. I commenced to work when I was a very small boy in the mines, about 9 years old.

Mr. Bartlett. That is not long ago?

Mr. Sellwood. It is a good while ago.

Mr. Young. Where?

Mr. Sellwood. Cornwall, England.

Mr. Young. How long did you continue working in that way?

Mr. Sellwood. I worked there until I was about 18 years old.

Mr. Young. Underground?

Mr. Sellwood. Underground.

Mr. Young. What did you do then?

Mr. Sellwood. I came to America when I was about 18—in 1865.

Mr. Young. Where did you go in this country?

Mr. Sellwood. I went to the copper country, in Michigan.

Mr. Reed. Houghton County?

Mr. Sellwood. I went to Ontonagon County.

Mr. Young. How long did you remain in the copper country?

Mr. Sellwood. About five years.

Mr. Young. What were you doing there?

Mr. Sellwood. I was working underground as a miner.

Mr. Young. Taking contracts or working by the day?

Mr. Sellwood. I was contracting.

Mr. Young. Doing the work yourself—the actual work—of mining and drilling?

Mr. Sellwood. Yes, sir.

Mr. Young. That was before the day of power drills?

Mr. Sellwood. Yes, sir.

Mr. Young. And from Ontonagon County where did you go?

Mr. Sellwood. I went to Marquette, Mich.

Mr. Young. What did you do there?

Mr. Sellwood. I went to work in the iron mines.

Mr. Young. At what point?

Mr. Sellwood. At Ishpeming.

Mr. Young. At what mine?

Mr. Sellwood. The New York mine.

Mr. YOUNG. What year was that?

Mr. SELLWOOD. In 1870.

Mr. YOUNG. How long did you remain at the New York mine?

Mr. SELLWOOD. I would say about eight years.

Mr. YOUNG. Taking out ore on contract?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. That would bring it up to 1878?

Mr. SELLWOOD. Yes. But I operated in the Cleveland mine and the New York mine; for some time in both.

Mr. YOUNG. Up to what time?

Mr. SELLWOOD. I went to work with the Cleveland mine and New York mine in 1874. I left the Cleveland mine in 1882. The New York mine I had left some time before that.

Mr. YOUNG. Where did you go in 1882?

Mr. SELLWOOD. I superintended the Dexter, the Argyle, the Boston, the Paschal; and around Ishpeming, at the Champion, until 1885.

Mr. YOUNG. Where did you go then?

Mr. SELLWOOD. I went to the Colby mine, at Bessemer, in the Gogebic Range.

Mr. YOUNG. Was that when the Gogebic was first opened up?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. How long did you remain with the Gogebic?

Mr. SELLWOOD. I remained there until the 1st of November, 1888.

Mr. YOUNG. Then you went to Minnesota?

Mr. SELLWOOD. I went to Minnesota the 1st of January, 1888, spending one week at each place—one week at Bessemer and one week at the Champion and Chandler mines.

Mr. YOUNG. What were you doing in Minnesota?

Mr. SELLWOOD. I opened up the Chandler mine.

Mr. YOUNG. For whom?

Mr. SELLWOOD. For the Minnesota Exploration Co. and the Minnesota Iron Co., jointly.

Mr. YOUNG. It became the property of the Minnesota Iron Co., did it not?

Mr. SELLWOOD. Yes; it did.

Mr. YOUNG. Then you remained with the Minnesota Iron Co. for some time?

Mr. SELLWOOD. Yes; I was with the Minnesota Co. until 1897—not all the time with the Chandler, however.

Mr. YOUNG. In what capacity were you with the Minnesota Iron Co.?

Mr. SELLWOOD. I was general manager of the Chandler mine until November, 1892.

Mr. YOUNG. Then what?

Mr. SELLWOOD. Then I left the Chandler mine and took charge of explorations on the Mesabi Range. It is about the time the Mesabi Range opened up. I really did not do much exploration, but just followed up the different work which was being done there.

Mr. YOUNG. What was your position with the company then?

Mr. SELLWOOD. They called me vice president of the railroad, the Duluth & Iron Range Railroad.

Mr. YOUNG. You remained there on the Mesabi until when?

Mr. SELLWOOD. I remained with the Duluth & Iron Range, or the Minnesota Iron Co., until 1897.

Mr. YOUNG. What have you been doing since then?

Mr. SELLWOOD. I have been managing different mines of my own and interested in some of Pickands, Mather & Co.

Mr. GARDNER. Were you with the Minnesota Iron Co. up to the time of its absorption by the Federal Steel Co.?

Mr. SELLWOOD. No, sir; I did some work for Mr. Gates—the American Steel & Wire; looked after their mines after I left the Minnesota Iron Co., and several mines of my own.

Mr. YOUNG. Then practically since 1856, when you were 9 years old, you have been engaged in the mining business, first as a common laborer and last as a manager and superintendent of large properties?

Mr. SELLWOOD. Yes, sir. I never drew a dollar's salary outside of a mining company in my life.

Mr. YOUNG. Are you familiar with the ore deposits in Michigan and Minnesota?

Mr. SELLWOOD. Quite familiar; yes.

Mr. YOUNG. You have seen that whole business grow, have you not, from a little nucleus at Ishpeming and Negaunee to its present proportions?

Mr. SELLWOOD. I have seen it grow from an output of about 500,000 tons to 43,000,000 tons.

Mr. YOUNG. All of which you saw and a large part of which you worked up?

Mr. SELLWOOD. I helped to open every range except the Marquette Range.

Mr. YOUNG. Have you been connected with the making of estimates as to the amount of ores in the Minnesota ranges?

Mr. SELLWOOD. Yes, sir. It was virtually my business after I left the Chandler mine, from 1892 until 1897. I was working for the Minnesota Iron Co., or the Duluth & Iron Range, and picked up all the properties, bought all the properties for them, and bought all the properties of the American Steel & Wire Co. on the Mesabi Range, and also Marquette and Menominee afterwards.

Mr. YOUNG. You remained with the American Steel & Wire until its absorption by the Steel Corporation?

Mr. SELLWOOD. Yes, sir; and about a year afterwards. I left them the last of December, 1902, I think it must have been.

Mr. YOUNG. What, in your judgment, is the extent of the deposits on the Mesabi Range of available ores to-day?

Mr. SELLWOOD. At this time?

Mr. YOUNG. Yes.

Mr. SELLWOOD. Well, I would say anywhere from 1,300,000,000 to 1,400,000,000.

Mr. GARDNER. I would like to know what the witness understands by the word "available?"

Mr. SELLWOOD. All that is developed.

Mr. GARDNER. That is, that can be used, of sufficient metallic content, so that it can be used by present known methods?

Mr. SELLWOOD. Yes, sir; merchantable ore.

Mr. GARDNER. And merchantable ore?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. You do not include in that the possible ores that have not been developed in that district?

Mr. SELLWOOD. No. I just include what is known of, but the country is very well developed. There has been very little ore discovered there in the last three or four years.

Mr. YOUNG. About what proportion of the ore of the Mesabi is owned by the Steel Corporation, leaving the Hill leases entirely out of calculation?

Mr. SELLWOOD. According to the tax commission's estimate of May, 1902, there is about 550,000,000 tons, and I think that is pretty near correct, according to my own judgment.

Mr. YOUNG. That they own about 550,000,000 tons?

Mr. SELLWOOD. I would say so. This is on the Mesabi Range?

Mr. YOUNG. Yes.

Mr. GARDNER. You gave the whole total on the Mesabi Range as 1,000,000,000.

Mr. SELLWOOD. About 1,300,000,000 tons.

The CHAIRMAN. What does the tax commission estimate the ore there?

Mr. SELLWOOD. They estimate about—I think it is better than 1,300,000,000.

Mr. YOUNG. 1,368,000,000, according to their last report, made in 1911.

Mr. SELLWOOD. They made a little more than that, I think, Mr. Young, last year than it was two years ago. It was not because they found more ore, but the tax commission took hold of that about five or six years ago, and at that time a good many of the independent miners put in a too low estimate and they revised it—sent men from the university to examine all the blue prints and all the mines—and in that way brought up the amount of ore. It is not that they have found much more since that time.

Mr. YOUNG. But the tax commission found more—which they knew about.

Mr. SELLWOOD. Yes. They found that the miners or operators put in too low an estimate in the first place.

Mr. YOUNG. They were anxious, I suppose, to get off with as light taxes as possible.

Mr. SELLWOOD. Yes.

Mr. REED. Are you speaking of the Steel Corporation when you speak of the miners?

Mr. SELLWOOD. No, sir: I do not. I referred more especially to the independent operators. The Steel Corporation always has been very fair.

Mr. YOUNG. You say that your judgment agrees pretty closely with the tax commission's?

Mr. SELLWOOD. It does.

Mr. YOUNG. About how much ore is there on the Vermilion Range?

Mr. SELLWOOD. The Vermilion Range is not as easy to estimate, because the veins are vertical: but it is very small compared with the Mesabi. I do not think that anyone would go on record for more than 25 or 30 million on the Vermilion Range. I would not. No one can see half of it.

Mr. YOUG. Is there any developed property on the Vermilion Range not owned by the Steel Corporation?

Mr. Sellwood. There is one partially developed, known as section 30.

Mr. Young. That is the St. Clair property?

Mr. Sellwood. Yes; the St. Clair property.

The Chairman. What per cent is that of the total deposit of ore in that vein?

Mr. Sellwood. That is not fully developed. I would say that they have not shown up a million tons a year.

The Chairman. What would you estimate the tonnage of the Vermilion Range at?

Mr. Sellwood. I would not put it to exceed 20,000,000. No one can see it. The vein is vertical, and it is not explored ahead; the Mesabi is flat.

Mr. Reed. The tax commission put it about 8,000,000.

Mr. Sellwood. Yes; I think there is more than 8,000,000. I know the Chandler mine is pitching in, and the Pioneer, the Zenith, and so on. I opened that district up.

Mr. Young. There has been a great deal of contradictory testimony here about the value of these properties. One witness has testified that he regarded 10 cents a ton as a good, liberal price for ore in the ground in Minnesota. Mr. Hill, on the contrary, testified that he thought his ores on what was known as the Hill land were from $1.50 to $2 a ton. We have all sorts of figures in between. The last figures of the Minnesota Tax Commission value the Minnesota mining properties at $232,000,000. And they say that that they regard as about 40 per cent of their value. They do not put it in those words. They say that the average rate of taxation in Minnesota is about 40 per cent, and they have tried to put these mines on a par with the other property, which would bring it up to five hundred and sixty-odd millions.

Now from the large experience that you have had buying these properties—and you have bought and sold a good many properties yourself, have you not, Mr. Sellwood?

Mr. Sellwood. Yes, sir.

Mr. Young. I would like your estimate as to what those properties are worth now, in your judgment.

Mr. Sellwood. Now?

Mr. Young. Yes.

Mr. Sellwood. Well, that question is pretty hard to answer, Mr. Young. In the first place, there is a difference of 75 cents a ton between the Bessemer and non-Bessemer.

Mr. Young. I understand.

Mr. Sellwood. Seventy-five cents a ton.

Mr. Young. In the market, you mean?

Mr. Sellwood. Yes, sir; in the market. So that would make Bessemer ore worth more at the market by 75 cents than non-Bessemer. Then you might get a non-Bessemer mine that is high and dry, and you could strip it, which would be worth a good deal more than if under ground and you had to pump 100 gallons of water a minute. So it is hard to fix the price. The Minnesota tax commission as a rule assesses all real estate from 40 to 50 per cent of its value, and they have assessed the value of these ores from 14 to 33 cents.

Mr. Gardner. From 14 to 33?

Mr. Sellwood. Yes, sir.

Mr. GARDNER. And that is supposed to be from 40 to 50 per cent of their true value?

Mr. SELLWOOD. Yes, sir. There are the figures and all the mines [indicating a table].

Mr. GARDNER. Can we have that included in the record?

Mr. YOUNG. That may be more complete than anything we have. Does that have the separate mines?

Mr. SELLWOOD. Yes; these are 1909 figures.

Mr. GARDNER. I would like to have this go in the hearing.

Mr. YOUNG. Will you let us have this?

Mr. SELLWOOD. Yes, sir; if you will return it to me after it has been copied.

Mr. YOUNG. I will offer this statement in evidence in connection with Mr. Sellwood's testimony.

The statement referred to was marked "Sellwood Exhibit No. 1," and will be found at the end of to-day's record.

Mr. YOUNG. Now, I want to know how your own judgment, being a man who has had large experience in buying and selling these properties, agrees with these figures.

Mr. SELLWOOD. Now, Mr. Young, it is a great big question. You take a large body of ore, 100,000,000 tons, and put it in at $1 a ton, and pay interest, and see what it would amount it. It is a different proposition if you have a small proposition—5,000,000 tons—where you can take it out in two or three years.

Mr. YOUNG. That would not be worth any such amount.

Mr. SELLWOOD. No; of course it is not. There is a great deal of difference between taking 50 cents a ton cash for the 100,000,000 tons of ore and waiting a hundred years and getting a dollar.

The CHAIRMAN. Right at that point, what can you buy the ore for, say, if there is any of it there left?

Mr. YOUNG. Ore lands.

The CHAIRMAN. Suppose you know there are 50,000,000 tons of non-Bessemer ore which has been drilled with an overburden of, say, 15 feet of soil; there is the average facility for getting it out, there being no more than the usual amount of water and pumping, or anything of that kind, and, as I say, the average amount of overburden, just the usual soil conditions over it——

Mr. SELLWOOD (interposing). There is not any such proposition, to have 50,000,000 tons.

The CHAIRMAN. Is there not 50,000,000 tons for sale there anywhere?

Mr. SELLWOOD. No.

The CHAIRMAN. Is there not 20,000,000 tons for sale there?

Mr. SELLWOOD. No, sir.

The CHAIRMAN. Is there not 10,000,000 tons there for sale?

Mr. SELLWOOD. Not at one place, because the big deposits are owned by the United States Steel, Jones & Laughlin, the Lackawanna Steel Co., and other manufacturers of steel.

The CHAIRMAN. There is no ore left there then?

Mr. SELLWOOD. I did not say that. I say there is not ten or twenty million of deposit there.

Mr. GARDNER. You are speaking now of the Mesabi?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. It is practically all preempted by various mining companies?

Mr. SELLWOOD. Yes, sir; there are five or six hundred thousand tons and up to two or three million tons, but none of that is ever bought for cash. I sold a piece of property to Jones & Laughlin five or six years ago, about 8,000,000 tons. We were paying a royalty of 36 cents a ton. I sold it to them for $2,000,000, and I took their notes payable $100,000 a year with 5 per cent interest. I could not have gotten a million out of it in cash.

The CHAIRMAN. Here is what I am trying to get at. You find 25,000,000 tons—we will use that amount hypothetically—in a body, and instead of leasing you purchase. You say, "I want to buy this 25,000,000 tons of ore." What would be a fair price for that ore to buy it all in one lot, whether you pay for it in notes or cash?

Mr. SELLWOOD. I do not think I would pay over 25 or 30 cents a ton, but I would rather pay a dollar a ton royalty.

Mr. GARDNER. You say that the royalty which you were paying on this parcel of ore land was 36 cents?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. And you sold it for a bonus?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Which was equivalent to 25 cents a ton.

Mr. SELLWOOD. $2,000,000.

Mr. GARDNER. That is equivalent to 25 cents a ton.

Mr. SELLWOOD. Yes, sir; and we took their notes.

Mr. YOUNG. The notes bear interest.

Mr. SELLWOOD. We took their notes with 5 per cent interest.

Mr. GARDNER. That is equivalent to cash.

Mr. SELLWOOD. Just about. I would sooner have it.

Mr. GARDNER. That particular ore land you are speaking of there was evidently worth 61 cents.

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Down in the ground.

Mr. SELLWOOD. But that was a Bessemer ore, and a stripping proposition. You could mine it with a steam shovel.

Mr. GARDNER. That is to say, it was the best imaginable proposition?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. What percentage of metallic content?

Mr. SELLWOOD. That would average better than 60 per cent, and about 4 or 5 per cent phosphorus.

Mr. GARDNER. The price of ore lands has advanced a great deal in the last 10 years; has it, or not?

Mr. SELLWOOD. Yes; in 10 years.

Mr. GARDNER. Has it advanced enormously?

Mr. SELLWOOD. No; not very much. You take a year like this, and you can hardly sell any product. We are getting $1.10 a ton less to-day than we got two years ago for ore.

Mr. GARDNER. You say, in your opinion, or rather in the opinion of the tax commissioners, ore lands are valued at from 14 to 33 cents?

Mr. SELLWOOD. That is the valuation they put on it.

Mr. GARDNER. And that is 40 to 50 per cent of their true value?

Mr. SELLWOOD. I did not say that. I say they assess real estate generally at from 40 to 50 per cent. That is supposed to be what they do.

Mr. GARDNER. And they attempt in this case to equalize mines to a real-estate basis for taxation?

Mr. SELLWOOD. I would think so.

Mr. GARDNER. That figures out from 35 cents minimum to 60 cents maximum a ton in the ground?

Mr. SELLWOOD. Yes.

Mr. GARDNER. And that is as of the date 1909?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Cast back your memory to 1901 for instance, and in order that I may fix the date in your memory, that was the time that the United States Steel Corporation was formed.

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. What was the value of the ore lands—that is, the fee value of the ore lands—per ton acquired by the United States Steel Corporation at that time?

Mr. SELLWOOD. I could not say what it was.

Mr. GARDNER. You are aware that in 1902 in court proceedings they valued, I think, 700,000,000 tons at a round figure of $1 a ton in the ground.

Mr. SELLWOOD. I heard so.

Mr. GARDNER. Does that strike you as being a conservative valuation?

Mr. SELLWOOD. No; I think it was very excessive at the time.

Mr. GARDNER. You thought it excessive?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Should you have said it was excessive if the valuation had been 50 cents instead of $1?

Mr. SELLWOOD. I would at that time, because we could have bought it much cheaper at that time.

Mr. GARDNER. You could have bought it, the fee simple, much cheaper at that time?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Do you think you could have bought it at 30 cents a ton at that time?

Mr. SELLWOOD. Not all of it, but a good deal of it.

Mr. GARDNER. I call your attention to the fact that a great deal of that was leased. I think 700,000,000 tons was leased land. On some of it they were paying royalties. I think in the State of Minnesota they were paying 25 cents royalty at that time.

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Therefore the only value to them must have been the bonus value of their leased lands?

Mr. SELLWOOD. Yes; but they owned some in fee.

Mr. GARDNER. About half, at the utmost, was owned in fee, if I recollect right.

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Now, then, taking that into consideration, that one half is owned in fee, the other half on leases, have you ever formed any estimate which would enable you to say what a fair valuation of those 700,000,000 tons would have been in 1901?

Mr. Sellwood. No; I do not know that I have; but it would not have been worth anything near that amount. It could be bought for much less at the time.

Mr. Gardner. It is rather an important point for us to get some sort of figures on, because the whole question of the capitalization of the United States Steel Corporation is involved in that valuation of ore lands.

Mr. Sellwood. There is an awful difference between paying 25 cents a ton on ore when you take it out than what it is to buy it in fee for 25 cents. As a matter of fact, where you buy a piece of ore where the interest is more on it than the royalty, you had better pay the royalty.

The Chairman. I believe you have a ratio for the sale of that ore out there fairly well fixed. In selling those ores if you have the royalty, is there not a corresponding fee fixed?

Mr. Sellwood. Yes.

The Chairman. What is that? Say a man who has a lease on a body of ore for 50 years, and he is paying 25 cents a ton for it, what would that ore be worth if you wanted to buy it, fee outright, estimating the leasehold was a fair valuation?

Mr. Sellwood. You can not quite figure it that way. If you will let me tell you something that occurred to John W. Gates—perhaps you all know him. You know of him, at least. I was looking after his mine, and he wanted me to give an estimate on the cost of ore from different mines for the following year. I said, "What are you going to call the cost?" He said, "We will call the mining royalty the cost, and we will take care of the fee." I said, "Here is the Saltry mine. You paid $700,000 for it, and you want to take out 100,000 tons." "Yes." "Well, at 6 per cent that would make 42 cents a ton interest. You take out," I said, "one hundred thousand tons and it is not worth as much. How much are you going to allow for depreciation?" He said, "Make it 5 cents." "All right, we will make it 5 cents."

You could buy that for 25 cents a ton, because it was a steam-shovel proposition. That was 72 cents. That is the Peak mine. We bought the Albany for 15 cents less, right adjoining, and we paid no bonus for it.

I said, "Here is your mining at 25 cents a ton, and just across the line your 15 cents a ton. That is just 40 cents on the leased property, against 72 cents on your fee. You can see the way that will work out." He said, "It don't pay to own fee property." I said, "Not when you pay that price."

The interest there and the sinking fund was more than the cost.

The Chairman. I have heard it stated—I do not know how true it is—by gentlemen who owned some ore properties out there, that on the average the fee is worth about 33⅓ per cent of the royalty per ton. That is, if it is leased at 25 cents a ton royalty and it is a large body of ore, the fee to it would be worth 8 cents a ton.

Mr. Sellwood. That is right; that is the basis we figure on.

Mr. Gardner. That would depend a good deal on the length of time.

Mr. Sellwood. Yes; that is the figure we have used there.

The Chairman. That is for 25 years?

Mr. Sellwood. Yes, sir; that is about the basis they settle on.

Mr. GARDNER. It would depend on the length of the leases?

Mr. SELLWOOD. Yes.

Mr. GARDNER. What is the length of the school leases?

Mr. SELLWOOD. I am not sure, but it is my impression 50 years.

Mr. YOUNG. Well, Mr. Sellwood, here is another thing you have to consider. It is not always the length of the lease, but it is the amount of the ore and how fast you will probably use it.

Mr. SELLWOOD. That is the idea exactly.

Mr. YOUNG. Suppose, for instance, a large concern—we will say the United States Steel Corporation—if they did not have this ore they are using now and they could get a property with twenty-five or thirty million tons on it, do you figure the taking of that out the first year would be a very different proposition to them than it would be to a concern that would only use a million tons a year?

Mr. SELLWOOD. Yes: or an independent shipper that could not sell over 250.000.

Mr. YOUNG. So you have to consider all that?

Mr. SELLWOOD. All those things; yes, sir.

Mr. YOUNG. In arriving at it?

Mr. SELLWOOD. Yes, sir; those figures I have just given you, if that product was 1,000,000 tons instead of 100,000 tons, the result would be entirely different.

Mr. YOUNG. Certainly.

Mr. SELLWOOD. There are so many things to be taken into consideration.

Mr. YOUNG. That is the Saltry proposition?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. You bought the Saltry property for Mr. Gates?

Mr. SELLWOOD. No; Mr. Gates bought that just before I went with him. I opened it up for him.

Mr. YOUNG. You looked it up?

Mr. SELLWOOD. No, sir; it was just before I went with him. I opened it up, I said.

Mr. YOUNG. Now, we did not quite finish your examination with regard to the quantity of these ores. You estimated that on the Mesabi the Steel Corporation had about 550,000,000 of tons. Could you estimate about what ore there is on that Hill property, what are known as the Hill properties? They embrace a lot of properties that the Hill syndicate did not own. Those that were embraced in the lease to the Steel Corporation and the other Hill properties that are left out, some 30.000 acres, a good many of which were bought or rented entirely.

Mr. SELLWOOD. I would say at least 250,000,000 tons. That is taking all the lands Mr. Hill owned and those he leased to the Steel Corporation, which he did not own, such as Longyear, Bennett, and Chism.

Mr. REED. Is the total 250,000,000?

Mr. SELLWOOD. I should say so. I would figure 100,000,000 of that belonged to outsiders.

Mr. YOUNG. That would make about 800,000,000 for the Steel Corporation and the Hill lands. That would leave something from 550,000,000 to 600,000,000 for the other owners, on your figures.

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. Do you know about how that is divided up?

Mr. SELLWOOD. I can give you a rough estimate. No one can give you the exact figures. I made a rough estimate on the train on my way here yesterday.

I have Mr. Hills's ore, 150,000,000; the Longyear lands, 100,000,000, which makes 250,000,000; the Mahoning ore being at least 150,000.000 tons.

Mr. YOUNG. Who is the Mahoning Co.? Who owns it?

Mr. SELLWOOD. The Cambria Steel Co. got a half, and I think the Steel Corporation got about a quarter. Is that right, Mr. Reed?

Mr. REED. I am not sure about it.

Mr. YOUNG. One sixth.

Mr. SELLWOOD. Perhaps one-sixth.

Snyder, about 50,000,000; Jones & Laughlin got 75,000,000 tons; Pickands, Mather & Co. got 75,000,000 tons. I think Corrigan & McKinney, 50,000,000. I would say the Ridgeways, about 25,000,000; the Wisconsin Steel Co. got 20,000,000.

Mr. YOUNG. Who were the Wisconsin Steel Co.?

Mr. SELLWOOD. The mining department of the International Harvester. The Biwobic got 10,000,000.

Mr. YOUNG. Who owned the Biwobic?

Mr. SELLWOOD. That is owned by the Brier Hill Co., and I think perhaps the steel company have got about one-sixth interest in that.

Mr. YOUNG. Who are the Brier Hill people?

Mr. SELLWOOD. That is one of the oldest concerns that has been in the iron business.

I would say that M. A. Hanna & Co. have got 50.000.000 tons. Most of the balance is smaller. I have not added those figures together to see where it would come out. I put in all the others, the little, small fellows like myself, different little fellows that are operating, at 50,000,000 tons. I do not know how that will figure out, but in round numbers that is about where it is.

Mr. YOUNG. When the Mesabi ores first came into the market was there any difficulty about using them in the furnaces?

Mr. SELLWOOD. There was.

Mr. YOUNG. What was the trouble?

Mr. SELLWOOD. The ore is a much finer ore than any of the Lake Superior ores, and has too much dust, and there would be explosions.

Mr. YOUNG. And blow up the furnaces?

Mr. SELLWOOD. Yes.

Mr. YOUNG. In the early years about what percentage of the ore could be used when they started using it?

Mr. SELLWOOD. Mr. Rattle, one of the great experts, said they could not use but 10 per cent, but I guess they starated out with 10 or 15 or 25. And now there are some furnaces that use it entirely.

Mr. YOUNG. Did this affect the price?

Mr. SELLWOOD. It did.

Mr. YOUNG. Of those properties?

Mr. SELLWOOD. It did.

Mr. YOUNG. Did it affect them seriously?

Mr. SELLWOOD. Why, yes. Will you let me use that book you have there?

Mr. YOUNG. What is that?

Mr. Sellwood. By Crowell & Murray. The first shipment of Mesabi ore in 1903, and if you will notice there was nothing but Bessemer ore shipped that year and in 1904. The price of Bessemer ore that year was $3 a ton; the next year, $2.35; the next year, $2.15, and $1.90 for the non-Bessemer. That is the first year they shipped.

The Chairman. This is lower lake ports?

Mr. Sellwood. Yes, sir. I want to see about the Marquette. The Marquette Bessemer ore in 1903 sold at $1.25 more, $4.25 against $3, at the same analysis. In 1904 it sold at $2.75 as against $2.35. They were getting closer together.

In 1905 it sold at $3.50 against $2.15, but your non-Bessemer ore from the Mesabi sold at $1.90 in 1905, $2.15 in 1906, $1.40 in 1907, and $1.75 in 1908. There was a variation of about $1 a ton.

The Chairman. 1908?

Mr. Sellwood. Yes, sir.

The Chairman. What is the difference in 1908?

Mr. Sellwood. In 1908 the Marquette Bessemer ore sold at $4.50; the Menominee sold at $5—all the same analysis. The Mesabi Bessemer ore sold at $4.75. The prices have been coming closer together ever since.

In 1910 Marquette Bessemer ore sold at $5; Menominee sold at $5; Vermilion sold at $5; and Mesabi sold at $4.75.

The Chairman. What year is that?

Mr. Sellwood. 1910.

The Chairman. What is it for 1907?

Mr. Sellwood. In 1907 the Marquette ores sold at $2.65 and the Mesabi ore sold at $2.25, delivered at Lake Erie ports.

Mr. Young. What was the price in 1909?

Mr. Sellwood. In 1909 the Marquette ore sold at $3.50; Menominee, $3; Mesabi, $2.40, all Bessemer ores; and $2 a ton for the non-Bessemer.

Mr. Young. How about in 1900?

Mr. Sellwood. In 1900 the Marquette ore sold at $6.48; the Menominee ore at $5.50; the Vermilion ores—I am afraid they have that wrong—$5.50. Vermilion they have got in too low, I am sure. But the Mesabi ore sold at just $4.50, $1 a ton below the Menominee, and the same analysis, 55 natural.

Mr. Young. Why has that been? That continues to some extent up to the present, does it not?

Mr. Sellwood. Yes. There is a differential now of about 25 cents. That came about in this way: The Mesabi ore was found all at once, and it was not known what to do with it. People did not know the value of it, and there was too much on the market, because it shipped cheap. I think in 1910 it shipped 30,000,000 out of 42,000,000 for the whole district.

Mr. Young. Is it not true that when the Mesabi came into the market first that it created a great excess of available ore for which there was no demand?

Mr. Sellwood. It did.

Mr. Young. And at the same time we had a panic on our hands.

Mr. Sellwood. Yes.

Mr. Young. And those two influences together forced the prices of all ores very low.

Mr. SELLWOOD. Yes. They delivered ore on Lake Erie ports in one or two of those years at $1.75 and $1.90, which was less than the freight, lake and rail, to say nothing about mining, royalty, and stripping. We paid 80 cents a ton rail freight and they paid anywhere from a dollar up to $1.50.

Mr. YOUNG. So a great deal of it was sold at an actual loss?

Mr. SELLWOOD. Yes, sir. The Duluth & Iron Range, the Minnesota Iron Co., and the Lake Superior Consolidated sold it for just about the freight, just to keep the railroads going.

The CHAIRMAN. We will suspend at this point until to-morrow morning.

Thereupon, at 4.40 o'clock p. m., the committee adjourned until to-morrow, Friday, April 12, 1912, at 10.30 o'clock a. m.

SELLWOOD EXHIBIT NO. 1.

Minnesota Tax Commission mineral test sheet, May 1, 1909.

Rate.	Name of property.	Corrected remaining tonnage.	Average analysis.		Company deductions and measurements.				Commission's measure, deduction and added tonnage.		
			Metallic iron dried.	Phosphorus.	Mining loss.	Rock.	Total.	Measurement (cubic feet).	Measurement (cubic feet), tentative.	Deduction (per cent).	Added tonnage.
23	Adams	23,392,831	60.63	0.047	......	20.0	20.0	14.3	14.4	......	....
14	Adriatic	785,924	56.00	.070	......	......	......	13.0	15.7	......	....
19	Agnew	3,686,430	50.00	.050	......	......	......	13.0	16.9	......	....
A	Ajax	25,000	56.50	.062	5.0	......	5.0	14.0	15.6	......	....
19	Albany	6,397,579	58.15	.075	10.0	......	10.0	15.0	15.3	5	336,713
19	Alberta	4,000	58.00	.055	......	......	......	......	15.3	......	....
8	Auburn	1,793,917	62.06	.055	......	......	......	13.0	13.0	......	....
19	Bangor	2,705,400	59.05	.066	10.0	......	10.0	15.0	15.0	......	....
23	Bessemer	801,143	58.30	.055	5.0	10.0	15.0	13.0	......	......	....
30	Biwabik	3,831,405	57.50	075	10.0	5.0	15.0	14.5	15.4	......	513,391
23	Bray	1,125,000	57.00	.060	5.0	15.0	20.0	13.0	......	10	125,000
19	Brunt	5,021,112	55.06	.052	10.0	10.0	20.0	15.0	16.0	10	557,901
30	Burt-Pool	7,947,636	60.30	060	......	......	......	14.4	14.4	......	....
15	Canisteo	10,580,585	58.00	.060	......	......	......	15.3	15.3	......	....
10	Canton	3,100,000	58.55	.060	......	......	......	15.1	15.1	......	....
23	Cass	38,879	56.00	.045	......	......	......	......	15.8	......	....
23	Chisholm	7,377,138	61.59	.067	......	......	......	13.6	13.6	......	....
30	Cincinnati	544,399	56.40	.060	20.0	20.0	40.0	14.5	15.5	......	455,558
23	Clark	4,243,914	58.82	.076	......	......	......	15.0	15.0	......	....
10	Cleveland - Cliffs property	300,000	54.00	.025	......	30.0	30.0	14.0	16.2	......	....
8	Coates	443,000	56.13	.035	5.0	10.0	15.0	13.0	15.7	......	....
19	Columbia	3,750,000	57.54	.056	10.0	30.0	40.0	15.0	15.4	10	1,250,000
23	Commodore	1,506,685	55.00	.070	10.0	......	10.0	12.5	16.0	......	....
14	Corsica	3,149,303	57.00	.052	10.0	......	10.0	14.0	15.5	......	....
14	Crosby	444,043	52.50	.045	5.0	25.0	30.0	14.0	16.5	......	....
14	Croxton	382,661	59.81	.061	15.0	15.0	30.0	13.5	14.6	10	85,269
19	Cyprus	123,308	59.40	.069	......	......	......	13.0	......	......	....
10	Day	5,836,956	58.71	.075	......	......	......	15.1	15.0	......	....
8	Diamond	1,666,666	57.50	.046	......	......	......	15.4	15.4	......	....
14	Duluth	225,000	60.00	.050	......	......	......	14.6	14.6	......	....
19	Elba	1,297,469	59.00	.045	15.0	......	15.0	13.0	15.0	......	....
15	Euclid	180,000	60.34	.101	3.0	10.0	13.0	13.0	15.5	......	....
15	Fayal	1,023,187	58.76	.047	......	......	......	15.1	15.0	......	....
27	....do	14,094,430									
19	Fowler	921,332	53.40	.061	10.0	40.0	50.0	15.0	16.4	20	409,481
23	Franklin	22,910	56.80	.032	5.0	15.0	20.0	13.0	......	......	....
14	Frantz	2,000,000	56.10	.055	......	......	......	14.0	15.7	......	....
19	Genoa	2,073,769	60.92	.063	......	......	......	14.1	14.0	......	....

Minnesota Tax Commission mineral test sheet, May 1, 1909—Continued.

Rate.	Name of property.	Corrected remaining tonnage.	Average analysis.		Company deductions and measurements.				Commission's measure, deduction and added tonnage.		
			Metallic iron dried.	Phosphorus.	Mining loss.	Rock.	Total.	Measurement (cubic feet).	Measurement (cubic feet), tentative.	Deduction (per cent).	Added tonnage.
15	Gilbert	12,111,745	59.49	0.046				14.8	14.6		
27	.....do	533,421									
11	Glenn	5,638,661	59.70	.064				14.7	14.6		
23	.....do	2,075,315									
23	Grant	8,044,705	59.47	.080	10.0	10.0	20.0	15.0	14.6		2,044,705
23	Hartley	5,484,470	59.55	.066				14.7	14.6		
14	Hawkins	5,766,499	54.76	.044				13.0			
14	Hector	169,750	56.50	.062	5.0		5.0	14.0	15.6		
14	Helmer	995,100	58.87	.068				14.0	15.0		
11	Higgins-McEwen	143,993	60.46	.030				14.4	14.0		
23	.....do	3,197,570									
14	Hobart	2,088,553	57.00	.078	10.0	20.0	30.0	14.0	15.5	20	261,069
8	Holman	879,198	58.00	.050				15.3	15.3		
10	Hudson	1,008,000	59.76	.083	5.0	5.0	10.0	15.0			
21	Hull	37,868,315	62.24	.054				13.0	13.0		
33	.....do	13,266,722									
14	Iroquois	1,377,991	56.58	.061	6.7	19.6	26.3	15.5	15.6	15	183,191
	Jennings		57.00	.065	25.0		25.0	18.0	15.5		
14	Kellogg	2,494,715	60.37	.042	2.0	3.0	5.0	12.5	14.5		
14	Kinney	5,106,411	58.00	.080		10.0	10.0	13.0			
14	Knox	876,728	59.42	.075				13.0	14.8		
14	La Belle	40,817	58.00	.040	6.0	33.5	39.5	13.5	15.3	25	7,782
14	Larkin	157,606	50.00	.028	2.0	3.0	5.0	13.0	16.9		
14	La Rue	2,825,679	55.96	.040	10.0	10.0	20.0	15.0	15.7	10	313,952
19	Laura	1,349,606	56.11	.079		25.0	25.0	13.0	17.2	10	224,934
19	Leetonia (U. G.)	3,413,699	56.79	.061	10.0	20.0	30.0	15.0	15.6	15	602,417
19	Leetonia (O. P.)	4,329,793	61.09	.053	10.0	20.0	30.0	15.0	14.0	5	1,139,419
8	Lenont property	2,500,000									
23	Leonard	10,942,045	58.02	.084				15.3	15.2		
15	Leonidas	10,675,000	57.66	.043		20.0	20.0	15.4	15.3		
23	Lincoln	1,841,424	57.68	.033	10.0	30.0	40.0	14.0	15.3	15	541,595
27	Lone Jack	2,319,195	62.63	.067					13.0		
19	Longyear	8,500,000	57.00	.073	10.0	15.0	25.0	15.0	15.5	15	1,000,000
23	McKinley	1,976,847	60.14	.037				14.5	14.6		
33	Mahoning	22,533,691	61.49	.065				13.6	13.6		3,708,347
21	.....do	51,300,390									
14	Malta	85,863	56.00	.020	15.0		15.0	14.0	15.8		
19	Mariska	142,416	57.35	.050	5.0	15.0	20.0	13.0			
14	Mayas	50,000	55.00	.040	5.0	3.0	8.0	14.0	16.0		
19	Meadow	1,046,358	53.00	.080	10.0	40.0	50.0	15.0	16.4	20	392,384
23	Miller	1,900,212	59.00	.090	5.0		5.0	12.6	14.9		
10	Minnewas	6,999,475	60.57	.062				14.3	14.4		
23	Minorca	107,519	58.50	.047	15.0		15.0	13.0	15.0		
27	Missabe Mountain	11,434,476	61.50	.067				13.7	13.7		
19	Mohawk	1,227,686	58.25	.075	10.0		10.0	14.0	15.2		
15	Monica	200,000	59.20	.040	5.0	15.0	20.0	13.0			
14	Monroe	32,742,642	57.75	.099				15.4	15.3		
30	Morris	26,235,779	58.49	.073				15.1	15.0		
......	Morrow	14,102	58.12	.055							
15	Morton	1,500,000	55.97	.055				13.0	15.8		3,414,343
30	Mountain Iron	24,516,493	59.16	.046				14.9	14.8		
10	Myers	3,409,468	58.97	.073				15.0	15.0		
19	Myers	953,368									
14	Nassau	4,394,283	54.51	.088	15.0	10.0	25.0	14.0	16.0	15	516,974
27	Norman	4,910,251	59.47	.069				14.8	14.0		
27	Ohio	3,723,851	60.32	.074				14.4	14.4		
23	Onondaga	343,456	54.00	.022	5.0	15.0	20.0	13.0			
14	Pearce	90,000	57.81	.041	10.0	10.0	20.0	13.6	15.3	10	10,000
10	Pearson	250,000	56.00	.047				13.0	15.7		
10	Penobscot	5,636,085	58.25	.058				15.2	15.2		
10	Perkins	325,000	57.00					15.6			
14	Pettit	648,900	57.40	.061	5.0	15.0	20.0	13.0			
11	Pillsbury	2,018,650	60.79	.069				14.2	14.2		
23	Pillsbury	1,846,990									
10	Rust	5,151,962	61.81	.053				13.3	13.0		
21	Rust	71,275,955									
15	Sauntry-Alpena	31,781,709	58.80	.058				15.0	15.0		
15	Schley	6,500,000	57.50	.060	5.0	15.0	20.0	13.0			
8	Scranton	19,592,143	57.00	.077	10.0		10.0	15.0	15.5		1,866,143

Minnesota Tax Commission mineral test sheet, May 1, 1909—Continued.

Rate.	Name of property.	Corrected remaining tonnage.	Average analysis.		Company deductions and measurements.				Commission's measure, deduction and added tonnage.		
			Metallic iron dried.	Phosphorus.	Mining loss.	Rock.	Total.	Measurement (cubic feet).	Measurement (cubic feet), tentative.	Deduction (per cent).	Added tonnage.
......	Section 30	31,405	58.00	.058	5.0	3.0	8.0	12.0	15.2	......	......
11	Sellers-Townsite	28,981,648	60.60	.090	......	......	......	14.3	14.3	......	......
23	Sellers	17,795,245									
10	Seville	280,000	56.17	.090	5.0	7.0	12.0	13.0	15.7	......	......
15	Sharon	14,992,788	57.42	.090	......	......	......	15.5	15.4	......	......
10	Shenango	100,000	56.40	.080	......	......	......	15.0	15.6	......	......
14	Shenango	8,473,454									
19	Shenango	1,450,159									
[illegible]	Shenango No. 2 Pros.	4,200,000	55.60	.138	......	......	......	15.0	15.9	......	......
8	Shenango No. 3 Pros.	900,000	53.00	.109	......	......	......	15.0	16.4	......	......
23	Sliver	2,558,844	58.00	.060	......	......	......	13.6	15.3	......	......
15	Sparta Townsite	1,769,545	58.51	.068	......	......	......	15.1	15.2	......	......
19	Spring	210,227	53.22	.029	......	5.0	5.0	14.0	16.4	......	......
23	Spruce-Cloquet	15,885,604	60.80	.046	......	20.0	20.0	14.2	14.2	......	......
14	St. Clair	2,590,116	57.30	.101	......	......	......	15.2	15.4	......	......
A	St. James	$550,000	48.00	......	......	......	......	......	17.2	......	......
19	St. Paul	2,840,472	52.00	.080	10.0	......	10.0	12.6	16.6	......	......
10	Stephens	10,501,012	58.05	.065	......	......	......	15.3	15.3	......	......
15	Stephens	17,641,074									
27	Stevenson	2,410,374	59.00	.050	10.0	......	10.0	12.6	14.9	......	......
8	Sullivan No. 2 Pros.	100,000	52.00	.030	......	......	......	......	16.6	......	......
8	Sullivan No. 9 Pros.	500,000	52.00	.050	......	......	......	......	16.6	......	......
10	Susquehanna	8,501,921	57.52	.059	10.0	10.0	20.0	15.0	15.4	......	......
14	Susquehanna	12,860,780									
10	Sweney	1,846,123	62.50	.055	......	......	......	13.0	13.0	......	......
19	Syracuse	486,000	59.00	.042	10.0	......	10.0	14.0	15.0	......	......
14	Tener	7,970,735	60.89	.085	......	......	......	14.0	14.0	......	......
10	Tioga Pr. 28–58–20	1,200,000	54.00	.121	......	......	......	15.0	16.2	......	......
8	Tioga Pr. 27–55–26	2,000,000	......	......	......	......	......	......	......	......	......
19	Troy	256,159	53.00	.037	15.0	......	15.0	15.0	16.4	......	......
23	Union	2,005,348	57.90	.050	5.0	15.0	20.0	13.0	......	......	......
19	Utica	3,734,516	58.00	.065	10.0	......	10.0	15.0	15.3	......	......
19	Victoria	165,404	60.60	.052	5.0	15.0	20.0	13.0	......	......	......
23	Wacoutah	4,842,119	57.00	.065	1.0	......	1.0	15.0	15.5	......	......
10	Webb	6,750,000	56.20	.097	......	......	......	15.0	15.7	......	......
19	Webb	617,056									
8	Whiteside, Robert	1,200,000	......	......	......	......	......	......	......	......	......
23	Williams	99,300	......	......	......	......	......	......	......	......	......
14	Wills	203,088	54.00	.075	5.0	15.0	20.0	13.0	......	......	......
19	Winnifred	248,385	60.80	.059	......	......	......	14.1	14.0	......	......
8	Yates	539,711	52.00	.085	......	......	......	15.0	16.6	......	......
14	Yawkey	52,293	57.00	.105	10.0	......	10.0	15.0	15.5	......	......

No. 62

UNITED STATES STEEL CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

FRIDAY, APRIL 12, 1912

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

UNITED STATES STEEL CORPORATION.

Committee on Investigation of the
United States Steel Corporation,
House of Representatives,
Friday, April 12, 1912.

The committee this day met, Hon. Augustus O. Stanley (chairman) presiding.

FURTHER STATEMENT OF MR. JOSEPH SELLWOOD.

Mr. Young. Mr. Sellwood, have you made, from this Minnesota Tax Commission report for the year 1909, a statement of the tonnages as found by them at that time in the properties owned by the Steel Corporation?

Mr. Sellwood. I did.

Mr. Young. Is this the paper which I show you [handing paper to witness]?

Mr. Sellwood. Yes, sir.

Mr. Young. That is a correct statement of the figures found by the tax commission, is it?

Mr. Sellwood. Yes, sir; copied right off their list.

Mr. Young. We offer this. This is a list of the Steel Corporation's amounts of tonnage found by the tax commission in 1909.

The statement referred to appears in full below.

Tax commission's report of ore in steel company's mines, May 1, 1909, Mesabi Range.

Name of property.	Remaining tonnage.	Name of property.	Remaining tonnage.
Adams	23,392,831	Myers	3,409,468
Auburn	1,793,917	Myers	953,368
Burt-Pool	7,947,636	Norman	4,910,251
Canisteo	10,580,585	Ohio	3,723,851
Canton	3,100,000	Penobscot	5,636,085
Chisholm	7,377,138	Pillsbury	2,018,650
Duluth	225,000	Pillsbury	1,846,990
Fayal	1,023,187	Rust	5,151,962
Fayal	14,094,430	Rust	71,275,955
Genoa	2,073,769	Sauntry-Alpena	31,781,709
Gilbert	12,111,745	Sellers-Townsite	28,981,648
Gilbert	533,421	Sellers	17,795,245
Glenn	2,075,315	Sharon	14,992,788
Glenn	5,638,661	Sparta Townsite	1,769,545
Hartley	5,484,470	Spruce-Cloquet	15,885,604
Holman	879,198	St. Clair	2,590,116
Hull	37,868,315	Stephens	10,501,012
Hull	13,266,722	Stephens	17,641,074
Leonidas	10,675,000	Sweney	1,846,123
Lone Jack	2,319,195	Tener	7,970,735
McKinley	1,976,847	Union	2,005,348
Minnowas	6,999,475	Winnifred	248,385
Mesabi Mountain	11.434.476	Clark	4,245,000
Monroe	32,742,642		
Morris	26,235,779		523,547,252
Mountain Iron	24,516,493		

Mr. YOUNG. You said, Mr. Sellwood, that in the early days on the Mesabi Range that that property was a great deal depreciated, first by the fact of there being a panic, and second, by the fact that the value of that ore had not been determined—did not know whether you could use it in the furnaces?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. And did you have anything to do at one time with an attempt to sell the old Merritt properties to Mr. Porter, of the Minnesota Iron Co.?

Mr. SELLWOOD. I tried to buy it for the Minnesota Iron Co.

Mr. YOUNG. Yes. At about the time that the Rockefeller deal was on?

Mr. SELLWOOD. Yes, sir; and the year before that also.

Mr. YOUNG. At the time this Rockefeller deal was on, did you fix any price, or did they fix any price on the property?

Mr. SELLWOOD. They did.

Mr. YOUNG. What price did they fix?

Mr. SELLWOOD. They fixed a million and a half for the control of the railroad and the mines.

Mr. YOUNG. Did the Minnesota Co. offer to take it at that price?

Mr. SELLWOOD. They did not.

Mr. YOUNG. Why?

Mr. SELLWOOD. It was in the panic, and I guess they did not have the money.

Mr. YOUNG. Mr. Merritt made the statement here that that was because Mr. Rockefeller had warned everybody off; that they must not touch it. Do you think that had any influence on the Minnesota Iron Co.?

Mr. SELLWOOD. I do not. I was handling that end of the business for the Minnesota Iron Co. at that time. As a matter of fact, I picked up all the properties that they had, and that was my business. I did not do anything else, but kept posted on the development of that range.

Mr. YOUNG. And their reasons for not taking it then were that in the panic they did not want to extend their liabilities any further?

Mr. SELLWOOD. No, sir. I remember Mr. Porter said to me, when I hesitated to take it, he said: "I am satisfied it is a good thing, but where are you going to get the million and a half dollars?" This was in January, 1894.

Mr. YOUNG. What was Mr. Porter's position with the Minnesota Iron Co.?

Mr. SELLWOOD. He was the chairman of the board of directors.

Mr. YOUNG. The financial manager of the company?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. Do you know anything, Mr. Sellwood, about the Utah ores?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. Have you made any examination of——

Mr. SELLWOOD. I did.

Mr. YOUNG (continuing). Of that district?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. How long were you there?

Mr. SELLWOOD. I was there about two weeks.

Mr. Young. Well, what can you say as to the extent of those deposits, as you ascertained them?

Mr. Sellwood. Well, I think I covered a district of about 40 miles.

Mr. Reed. In what part of Utah?

Mr. Sellwood. It is in Iron County, and I rather think it is the southwest part of Utah. Iron County, they call it. Iron Springs is the little village, and then a place called Cedar something—not Cedar Rapids; I don't remember the last part. That is where I stopped. There is mountains of it there, and you could see the mountains perhaps a mile or two apart, but right in line with each other, and I would say I would be justified in saying that the ore continued from one bed to another in the low ground, but there had been no work done in the low ground except at one point. Lurch Bros., at Hibbing, had opened up a great deal of ore at one place in the low ground, sunk shafts down two or three hundred feet, and driven crosscuts as much as three or four hundred feet in width; so there was a very large amount of ore there in sight; you could see it for miles—black. They have the black magnetic ore and the red hard ore, and some soft amatite, very similar to the mines in Michigan.

Mr. Young. How does this ore lie?

Mr. Sellwood. It seemed to lie vertical, or almost so. You could see it at the end of the mountains. You could see about the pitch. I would say perhaps about 70°.

Mr. Young. About how much?

Mr. Sellwood. About 70°.

Mr. Young. It is in beds there?

Mr. Sellwood. It seemed to be.

Mr. Young. Did you make any estimate of what ore there was shown up—the extent of it there?

Mr. Sellwood. I did.

Mr. Young. What was your estimate?

Mr. Sellwood. I would say that there was over 500,000,000 tons in sight in those mountains, and providing it continues along the low ground in the same way, there are chances that there is twice as much there.

Mr. Gardner. In the whole State of Utah, or that particular district?

Mr. Sellwood. In that particular district.

Mr. Gardner. That is, there might be anywhere from 500,000,000 to 1,000,000,000 tons?

Mr. Sellwood. Yes, sir.

Mr. Reed. Of what grade?

Mr. Sellwood. It is a very good ore, Mr. Reed. In most of the ore you see there is from 60 to 65 per cent.

Mr. Young. Is there any coal anywhere in that vicinity that could be taken to this ore, or the ore taken to the coal?

Mr. Sellwood. There is coal within 150 miles, but not a good coking coal. I had a coal man with me. I went out there for Mr. Gates, and I think Mr. Hill was interested with him and also Mr. Harriman. I went out for them.

Mr. Young. Mr. James J. Hill?

Mr. Sellwood. Yes, sir.

Mr. Young. And what Harriman?

Mr. SELLWOOD. Harriman, of the Union Pacific. I reported to them. This was just ahead of the fight on the Northern Pacific between Hill and Harriman for the control.

Mr. YOUNG. Yes; Do you know anything about other deposits of ore in the United States?

Mr. SELLWOOD. Well, I know something about Texas. I have been down there looking at some of those ores. I did not see a large amount of ore in Texas.

Mr. YOUNG. Where is that? Where is that ore section?

Mr. SELLWOOD. I think it is in Jefferson County, a part of it, and there is another part in Llano.

Mr. YOUNG. I did not get the last of that.

Mr. SELLWOOD. I say there was a small amount in Llano County that was a hard high-grade ore. The other ore in Jefferson was a low-grade ore, about 40 or 45 per cent.

Mr. BEALL. Were you up about Rusk, where one of the penitentiaries is located, and where they have an iron foundry?

Mr. SELLWOOD. No, sir.

Mr. BEALL. You did not inspect the ore up in that section?

Mr. SELLWOOD. No, sir; just in the two districts, Jefferson and Llano Counties.

Mr. BEALL. You were at Beaumont. Do you remember whether that was a town?

Mr. SELLWOOD. No; there was a little town of Llano, in Llano County.

Mr. BEALL. Llano is not very far from Austin.

Mr. SELLWOOD. Yes; I have also been in the Wyoming district—that Sunrise district. That is where the Colorado Fuel & Iron Co. get most of their ore now. There is considerable there, but it does not compare with the Lake Superior district. It might compare with the Gogebic.

Mr. YOUNG. What do you mean? In extent or in quality?

Mr. SELLWOOD. In extent and quality, both. I meant in extent.

Mr. YOUNG. About what grade of ore is that?

Mr. SELLWOOD. Sixty to sixty-two per cent.

The CHAIRMAN. Are you referring now to the ore holdings of the Colorado Fuel & Iron Co., or to——

Mr. SELLWOOD. The Colorado Fuel & Iron Co. owned all that district.

The CHAIRMAN. The Utah district?

Mr. SELLWOOD. Oh, no; the Wyoming district; Sunrise.

The CHAIRMAN. You are referring only to Sunrise now?

Mr. SELLWOOD. Yes.

Mr. GARDNER. How much ore is there in Wyoming, should you suppose?

Mr. SELLWOOD. Well, I don't think that I saw over a hundred million tons.

Mr. YOUNG. How much?

Mr. SELLWOOD. A hundred million.

Mr. YOUNG. Five million?

Mr. SELLWOOD. No; a hundred million, in that district.

Mr. YOUNG. Well, did you examine the whole district?

Mr. SELLWOOD. Yes; that Sunrise district.

Mr. REED. That is in eastern Wyoming, is it not?

Mr. Sellwood. Yes.

Mr. Young. How does that ore lie?

Mr. Sellwood. That is vertical, too.

Mr. Young. Is it pretty difficult to determine the amount of it or not?

Mr. Sellwood. No; I would say not. There was a great deal of outcrop. They had shafts down three or four hundred feet deep in some places. I do not say it is fully explored, but there was enough explored to show up at that time, so I would put it at about 100,000,000 tons.

The Chairman. Speaking of that outcrop; that is to say, the outcrop in the mountainous region there, the erosion was such that you could get an idea of the extent of it?

Mr. Sellwood. Yes, sir. There was no dirt on it at all, so the walls and the vein was outcropped.

The Chairman. Like a streak through the side of the mountain?

Mr. Sellwood. Yes, sir.

Mr. Young. Did you make any estimate of the amount of ore in the two Texas districts?

Mr. Sellwood. No; I did not. There was not enough where I was to pay any attention to it.

Mr. Young. Are you familiar with any other ore districts in the United States?

Mr. Sellwood. Not outside of those I have mentioned and the Lake Superior district.

Mr. Reed. How about the Baraboo district?

Mr. Sellwood. I had forgotten that. I know about that.

Mr. Young. That is in Wisconsin?

Mr. Sellwood. Yes. I opened a mine there for the Wisconsin Steel Co., which is the only mine that has been opened up. We shipped four or five thousand tons from the Baraboo district, but there was so much water there that we have not mined it for two or three years.

Mr. Young. Did you make any estimate of the amount of ore that is shown up in that district?

Mr. Sellwood. I would say that there are two or three hundred million tons of ore that is shown up in that district by drill holes; that is, taking all grades from 40 per cent up. In the Illinois mine we had a vein about 25 feet wide, that would go about 55 per cent, but there is about 200 feet in width which will go only about 40 per cent. That we did not mine.

Mr. Young. Is the main difficulty there with the water?

Mr. Sellwood. Yes. We were the only mine in the district.

Mr. Young. And you had to pump everybody's else?

Mr. Sellwood. Yes; we pumped there better than 4,000 gallons of water a minute.

Mr. Young. But if that whole district was being worked, that would greatly reduce the pumping charges?

Mr. Sellwood. Oh, yes; there is not an unusual amount of water in the district, if it were properly distributed.

Mr. Young. Yes; but your product was not large enough to pay for pumping the whole district?

Mr. Sellwood. No.

Mr. Young. I have not asked you anything especially about the Michigan ranges. You are pretty familiar with them?

Mr. Sellwood. Yes.

Mr. Young. You have operated in the Marquette Range, in the Gogebic Range, and others?

Mr. Sellwood. Also the Menominee.

Mr. Young. Mr. J. R. Finlay made an estimate last fall—last summer or fall, working at it a number of months, for the State tax commission of the ore in the Lake Superior district in Michigan. His estimate is 189,000,000 tons, shown up. What would you think—what would be your judgment as to whether that is a fair estimate, or whether it should be more or less?

Mr. Sellwood. Does that refer to the high-grade merchantable ores?

Mr. Young. Yes; the high-grade merchantable ores.

Mr. Sellwood. Well, I would say it is pretty accurate.

Mr. Young. Pretty what?

Mr. Sellwood. Pretty accurate.

Mr. Young. Pretty accurate?

Mr. Sellwood. Yes. Of course, if you take in the low-grade ores, it is a good deal more.

Mr. Young. Yes; we have an estimate on the low-grade ores from Mr. Hayes, of the Geological Survey, who found about 75,000,000 tons up there of this low-grade stuff.

Mr. Reed. Seventy-five billion.

Mr. Young. Yes.

Mr. Reed. That included the Mesabi, did it not, Mr. Young?

Mr. Young. Yes.

Mr. Bartlett. You say estimated at 175,000,000 tons?

Mr. Young. No; you haven't got the report there. You have another one. I said that the report was 75,000,000,000 tons for the ore above 35 per cent. That is in our hearings in No. 28. You have Leith's report there on Michigan.

Mr. Reed. Just in that connection, Mr. Young, would it not be interesting to know what percentage of that 75,000,000,000 would be on the Steel Corporation's properties?

Mr. Young. Yes.

Mr. Reed. If Mr. Sellwood knows about it.

Mr. Young. Well, first I will take the high-grade available ores, 189,000,000 tons. Mr. Finlay reports that 54,000,000 of that was owned by the Steel Corporation.

Mr. Sellwood. In the three ranges?

Mr. Young. Yes; on the three Michigan ranges.

Mr. Sellwood. Yes.

Mr. Young. And 135,000,000 by independents or other interests.

Mr. Sellwood. Well, I could not say just whether that proportion is right or not, but I know the great big bulk of that low-grade ore——

Mr. Young. I am not talking of the low-grade—the high-grade. His estimate is 54,000,000 for the Steel Corporation and 135,000,000 to other parties.

Mr. Sellwood. Yes.

Mr. Young. We have that estimate in our hearings. You would not be able to judge as to that, you say?

Mr. Sellwood. Yes; I would pretty accurately as to that; but I thought you referred to the low-grade ores.

Mr. Young. No.

Mr. Sellwood. I do not think the United States Steel Corporation has nearly half of the ore in either one of the ranges—the Gogebic, Marquette, or Menominee. I have not gone into that carefully in the last few years, but I know about what mines they operate and the mines the other people operate. I would say the Cleveland-Cliffs have much more ore in the Marquette Range than the United States Steel Corporation has.

The Chairman. In that connection, what amount of ore in the Gogebic, Marquette, and Menominee Ranges is now held by individuals and for sale or lease to anybody who cares to go into the iron-ore business or start a new industry?

Mr. Sellwood. Well, I would say, offhand, about two-thirds of that ore is held by different people outside of the United States Steel Co. Some of them are manufacturing themselves. Rogers Brown, for instance, they are manufacturers; the Hanna Co.; and Corrigan & McKinney.

The Chairman. You did not catch my question. I asked you how much of it is held by persons not interested in the iron business at all and who simply want to sell that ore or lease it. How much of it is on the market, owned by Tom, Dick, and Harry?

Mr. Sellwood. I would say, offhand—and this is only a guess—from 25 to 30 per cent.

The Chairman. Of the Michigan ores?

Mr. Sellwood. Yes, sir.

The Chairman (continuing). That that is so held, is it held in large bodies or small bodies?

Mr. Sellwood. Small bodies.

Mr. Young. I suppose that practically all of this ore could be bought if you paid the price, could it not?

Mr. Sellwood. If you paid the price, perhaps the Steel Co. would sell theirs, but the great big bulk of it is owned by manufacturers.

Mr. Young. Yes; but you would not—if, for instance, you wanted to start a steel company, you would not think it was a hopeless proposition to buy up some of those large holdings, would you, from companies which had plants of their own, if you would take the plants with them?

Mr. Sellwood. No; that could be done.

Mr. Young. Yes. Mr. Finlay's estimate—you were speaking about the Marquette district—shows that in Marquette County the Steel Corporation has 22,207,355 tons and the Cleveland-Cliffs Co. 43,722,158 tons—about twice as much—on the Marquette Range. Do you think that is about right?

Mr. Sellwood. I would think that was a fair proportion of the different holdings.

Mr. Young. That proportion is a good deal larger, the proportion owned by the Cleveland-Cliffs, than it was eight years ago, is it not?

Mr. Sellwood. Yes.

Mr. Young. They have acquired the Negaunee mine?

Mr. Sellwood. Yes.

Mr. Young. And which formerly the Steel Corporation owned?

Mr. Sellwood. Yes.

Mr. Young. And they have acquired the Maas mine?

Mr. Sellwood. Yes.

Mr. YOUNG. They have opened up the Swanzey Range?

Mr. SELLWOOD. Yes.

Mr. YOUNG. And opened up that property west of Ishpeming?

Mr. SELLWOOD. Yes.

Mr. YOUNG. So their proportion is increasing much more rapidly?

Mr. SELLWOOD. Yes; I think it has been doubled in the last 10 years.

Mr. YOUNG. Now, in regard to this question suggested by Mr. Reed, as to the low-grade ores, could you form any estimate at all on those, as to the proportion of the low-grade ores on the different ranges in the Lake Superior district that are owned by the Steel Corporation and the proportion which are owned by outsiders?

Mr. SELLWOOD. No; I could not. I have not paid very much attention to it, because it was not considered merchantable.

Mr. YOUNG. Yes.

Mr. SELLWOOD. But I know all those outcroppings there pretty well through the Marquette and Menominee Ranges, and I know a great deal of it is owned by the Cleveland-Cliffs. That old Jackson mine——

The CHAIRMAN. Is the Cleveland-Cliffs a manufacturing concern?

Mr. SELLWOOD. Sir?

The CHAIRMAN. I say, is the Cleveland-Cliffs a manufacturing concern?

Mr. SELLWOOD. The Cleveland-Cliffs?

The CHAIRMAN. Yes.

Mr. SELLWOOD. Only to the extent of pig iron.

Mr. YOUNG. They use a very small proportion of the ore they produce?

Mr. SELLWOOD. Yes. They have a working contract, I think, with the Lackawanna people, and sell a good deal of ore to them.

Mr. YOUNG. They furnish the Lackawanna a good deal of their ore?

Mr. SELLWOOD. Yes.

Mr. YOUNG. In the Jackson property are there a good many million tons of that low-grade ore?

Mr. SELLWOOD. Yes; there is.

Mr. YOUNG. That is one of the largest deposits there is, is it not?

Mr. SELLWOOD. I would consider it so.

Mr. YOUNG. Of low-grade ore?

Mr. SELLWOOD. Yes.

Mr. YOUNG. Then you are familiar with the Cascade Range?

Mr. SELLWOOD. Yes.

Mr. YOUNG. There are large bodies of low-grade ore there?

Mr. SELLWOOD. There is.

Mr. YOUNG. Do you know who those are owned by?

Mr. SELLWOOD. Well, I think the Breitung estate own considerable. I do not know of but one property that the United States Steel Corporation owns there, and that is the Moore mine, and I bought that for the American Steel & Wire, for the Consolidated. I think Maitland and Fitzpatrick own a great deal of that.

Mr. YOUNG. This range is the Marquette County range?

Mr. SELLWOOD. Yes. I operated out there.

Mr. YOUNG. The Moore mine was a small proposition, was it not?

Mr. SELLWOOD. Yes.

Mr. YOUNG. Do you remember what you paid for it?

Mr. SELLWOOD. Yes.

Mr. YOUNG. What was it?

Mr. SELLWOOD. $15,000.

Mr. YOUNG. $15,000?

Mr. SELLWOOD. Yes; for the fee.

Mr. YOUNG. I think that is all for the present.

Mr. REED. May I suggest a question?

Mr. YOUNG. Certainly.

Mr. REED. Mr. Sellwood seems to be very familiar with the holdings of the Steel Corporation. I thought it might be interesting to know whether or not in his opinion, in view of the amount of blast-furnace capacity of the Steel Corporation, he thinks that the company's ore reserves are or are not excessive?

Mr. YOUNG. Well, I will ask him that question.

Mr. GARDNER. Well, before he answers it I would like to differentiate as to whether you mean the ore reserves as they are to-day or as they will be on the 1st of January, 1915, when the Hill lease terminates?

Mr. REED. Mr. Gardner, right in that connection perhaps I can help to straighten things out a little, if I explain that by a recent agreement with the Hill trustees a large part of the Hill ores which were not being operated at the present time were released to the trustees. The Steel Corporation at the present time has the right of possession only to that part of the Hill ores which it is operating; so a very large part of those ores are already released, just as much as they will be in 1915.

Mr. GARDNER. Did the witness know that?

Mr. REED. I don't remember whether he did or not.

Mr. GARDNER. I mean before we have his answer I would like to make that distinction.

Mr. REED. If we put it in two questions, and ask him whether the ore reserves as they will be after the surrender of all the Hill ores are, in his opinion, excessive, and whether if, with all the Hill ores included, he thinks they are excessive——

Mr. GARDNER. Yes, as they were on the 1st of January, 1911, and as they will be on the 1st of January, 1915, whether they are excessive.

Mr. REED. All right, put it in two questions.

Mr. YOUNG. All right, if you want it that way.

Mr. GARDNER. I just want to have it clear as to what he is answering.

Mr. YOUNG. Certainly.

Mr. SELLWOOD. Why don't you put it this way: The possessions of the United States Steel Corporation outside of the Hill lease, because I think we all understand that they go back in 1915.

Mr. YOUNG. Yes.

Mr. SELLWOOD. Wouldn't that cover it?

Mr. GARDNER. I didn't catch that.

Mr. YOUNG. I think that is what Mr. Gardner meant. I will put it this way: In view of the blast-furnace and manufacturing capacity of the United States Steel Corporation, would you say that their ore reserves, outside of the Hill lease, were excessive?

Mr. Sellwood. I would say they are not, when you consider all of their plant.

Mr. Gardner. How many years are their reserves good for at the present rate of exhaustion?

Mr. Sellwood. That will depend a good deal, Mr. Gardner, on how fast they operate. It will make a good deal of difference whether they will mine 15,000,000 or 25,000,000 tons a year.

Mr. Gardner. I say, at the present rate of exhaustion.

Mr. Sellwood. Well, at the present rate——

Mr. Gardner. They use a good deal more than that now, do they not?

Mr. Sellwood. I should say at the present rate it would last 40 years, but I expect to see their consumption, as well as that of everybody else, increased in the future.

The Chairman. I think the total for all companies is about 45,000,000.

Mr. Sellwood. I thought the question just pertained to the Mesabi ores. Am I right?

Mr. Young. No. All their ores, taking all the ores they have. I did not refer to the southern proposition, however.

Mr. Gardner. Now, Mr. Reed prefaced this by saying that Mr. Sellwood was familiar with the holdings of the United States Steel Corporation. I took it that his question was to ascertain whether in the opinion of the witness the holdings of the United States Steel Corporation in all ores were excessive in view of their future requirements.

Mr. Reed. I should perhaps have limited it to the Lake Superior ores, with which Mr. Sellwood is familiar. It is not fair to ask him about the Tennessee Co.'s ores; that he does not know anything about.

Mr. Gardner. Assuming that it does not.

Mr. Sellwood. No; I do not know anything about them.

Mr. Young. These Lake Superior ores could not be used in the Birmingham district and the Birmingham district ores could not be used in the northern furnaces?

Mr. Sellwood. No, sir.

Mr. Young. So I will put the question this way: That in view of the blast-furnace and manufacturing capacity of the Steel Corporation in its plants in the Northern States, would you say that its ore reserves outside of the Hill lease in the entire Lake Superior district, the three States, were excessive?

Mr. Sellwood. No, sir.

Mr. Young. And at the present rate of exhaustion about how long would they last?

Mr. Sellwood. I would think 25 years would clean them up—25 to 30 years.

Mr. Young. At the rate they are going now?

Mr. Sellwood. Yes, sir; at the rate they are going now; because the great big proportion of the ores is on the Mesabi Range. They have a small proportion in the other ranges. Now, I don't think they will clean up all the ore in the Mesabi Range in that time, but as far as we know now, I think they would clean up the Menominee, Marquette, and the Gogebic inside of 25 years.

Mr. Young. How long would the Mesabi last?

Mr. SELLWOOD. Well, take the Mesabi—if they take out 25,000,000 tons or 30,000,000 tons a year from there—it would not last over 25 years.

The CHAIRMAN. What did you estimate is the total consumption of the Steel Corporation of northern ores at the present time?

Mr. SELLWOOD. I could not tell you, Mr. Stanley, the amount of ore that they use from the Michigan ranges, but I can give you a pretty close idea of what they are using from the Mesabi. They are using from fifteen to nineteen million tons a year now, but the Lake Superior production of ores has increased wonderfully. It has increased from less than two and one-half millions in 1885 to 43,000,000 tons in 1910.

The CHAIRMAN. How many tons of ore do you consider that the Steel Corporation owns in the Superior district under lease or in fee?

Mr. SELLWOOD. How much do I consider they own?

The CHAIRMAN. Yes; what is the extent of their holdings?

Mr. SELLWOOD. Well, I think I would put the Mesabi at about 550,000,000 tons.

Mr. YOUNG. Well, you include in that the Vermilion?

Mr. SELLWOOD. No.

The CHAIRMAN. Taking the Mesabi at 550,000,000, and the consumption at 20,000,000 tons a year, that would last about 25 years.

Mr. REED. Make it 25,000,000.

Mr. SELLWOOD. I would put it at 25,000,000.

The CHAIRMAN. But they are not going to consume 25,000,000 tons in any one year?

Mr. REED. Well, last year the Steel Corporation consumed 22,185,000.

The CHAIRMAN. Well, 25,000,000 tons would be——

Mr. YOUNG. One hundred millions would last 4 years and 500,000,000 would last 20 years.

Mr. SELLWOOD. I would say they have an ore reserve in the Lake Superior district which will last about 25 years.

Mr. YOUNG. Well, now, as a matter of fact, Mr. Sellwood, the consumption of iron ore and the product of steel in this country has at least doubled every 10 years in the past, has it not?

Mr. SELLWOOD. Yes, sir; more than that.

Mr. YOUNG. So that if that process keeps up these ores would last a very much shorter time than you estimate?

Mr. SELLWOOD. Yes, sir; but I would say, taking an average of 25 years, that it would be 25,000,000 tons of Lake Superior ore.

Mr. YOUNG. Yes. According to your estimate, then, they would have about 550,000,000 tons on the Mesabi?

Mr. SELLWOOD. Yes.

Mr. YOUNG. And 20,000,000 tons on the Vermilion?

Mr. SELLWOOD. About. You can not see that.

Mr. YOUNG. Yes; you stated that. The tax commission only figured 8,000,000 tons there.

Mr. SELLWOOD. Yes.

Mr. YOUNG. And that it lay deep, and that you could not see it, but you thought there was probably 20,000,000 tons?

Mr. SELLWOOD. Yes.

Mr. YOUNG. Then add Mr. Finlay's estimate of 54,000,000 tons for the Michigan range and you would have about 625,000,000 tons altogether?

Mr. SELLWOOD. Yes, sir. I think that the United States Steel took out about 19,000,000 tons of Mesabi ores in 1910.

Mr. REED. That is about right; yes, sir; 22,185,000 from the whole Lake Superior district.

Mr. SELLWOOD. Yes. They had about 19,000,000, but they did not have as much last year.

Mr. REED. Then, on your figures the Hill ores would add about 10 years' supply to that?

Mr. SELLWOOD. I would say that the Hill ores, including the other interests in the same lease, would make about 250,000,000 tons.

Mr. REED. That is about 10 years' consumption?

Mr. SELLWOOD. Yes.

Mr. YOUNG. Do you know, for instance, whether their reserves of ore in the Lake Superior district, in proportion to their consumption, are not larger than, for instance, the reserves of Jones & Laughlin in proportion to their consumption?

Mr. SELLWOOD. I should say not.

Mr. YOUNG. I think that is all.

Mr. GARDNER. Mr. Sellwood, did you ever make any calculation as to how much merchantable ore there is in the whole United States?

Mr. SELLWOOD. I have not, Mr. Gardner.

Mr. GARDNER. No rough calculation even?

Mr. SELLWOOD. No; I have not.

Mr. GARDNER. Do you suppose you could estimate it? In the first place, I will ask you this question: Is there any likelihood of any new discoveries within the confines of the United States of large bodies of ore?

Mr. SELLWOOD. Why, that is a pretty hard question.

Mr. GARDNER. Well, has the United States been pretty thoroughly explored for ores? Continental; I do not refer to Alaska, but I mean the United States proper; has that been pretty thoroughly explored for ores?

Mr. SELLWOOD. It has not.

Mr. GARDNER. It has not?

Mr. SELLWOOD. No, sir; the Utah district has not been explored at all.

Mr. GARDNER. But you said, in answer to a query, that you thought there was very little ore in Utah, except in the southwestern part.

Mr. SELLWOOD. That is all I know of.

Mr. GARDNER. Then that means the superficial explorations have gone on in the other parts of the State.

Mr. SELLWOOD. A fellow in my business should know pretty well the amount of development.

Mr. GARDNER. Yes; and I should think a man in your business would have faced this question and have said to himself, "Now, how much merchantable ore is there in the United States?" to see where you are going to come out.

Mr. SELLWOOD. I have not, because I am not a consumer of ore.

Mr. GARDNER. But you are a vendor of ore.

Mr. SELLWOOD. Yes, sir; but I have always confined my operations entirely to the Lake Superior district. I have examined, as I told you, the Wyoming district and the Utah district for Mr. Gates when I was with them.

Mr. GARDNER. But you must be somewhat familiar—you must be able to estimate within 500,000,000 tons, anyway, how much merchantable ore there is in the United States, are you not?

Mr. SELLWOOD. I have not followed it, except in those districts that I have examined. I did not know what questions were going to be asked here. Mr. Stanley asked me to come here, and I have not made any figures very much.

Mr. GARDNER. Now, for instance, you have estimated the merchantable ore in the Lake Superior region——

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER (continuing). At how much—all of it?

Mr. SELLWOOD. Well, I would think there is about one billion three to four hundred million on the Mesabi Range.

Mr. GARDNER. Well, take the whole district. Haven't you ever totaled it up?

Mr. SELLWOOD. That would make it, I think, about sixteen hundred million tons of merchantable ore in the Lake Superior district. Isn't that right, Mr. Young?

Mr. YOUNG. Just a little over that.

Mr. GARDNER. Did that include the Wisconsin ores?

Mr. SELLWOOD. No, sir; it did not. I would put them in at a hundred million tons more.

Mr. GARDNER. A hundred milion more for Wisconsin?

Mr. SELLWOOD. Yes; I can do it that way as well as any other way, Mr. Gardner.

Mr. GARDNER. Now, how about the Utah?

Mr. SELLWOOD. I think I would estimate that at a billion tons.

Mr. GARDNER. One billion?

Mr. SELLWOOD. Yes; I think there is half of it exposed by the outcrops.

Mr. GARDNER. Now, Wyoming.

Mr. SELLWOOD. I would not put that at over 100,000,000 tons.

Mr. GARDNER. Now, what other bodies in the West or the far West are there? Are there any ores in the Sierra Nevada?

Mr. SELLWOOD. Yes; there are ores in California.

Mr. GARDNER. California?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Well, what is that estimate?

Mr. SELLWOOD. I would say it is safe to put it at about 250,000,000 tons.

Mr. GARDNER. 250,000,000 tons of merchantable ore?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Now, what other deposits can you think of in the West?

Mr. SELLWOOD. There is a little way down in Lower California.

Mr. GARDNER. You mean in Mexican California?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Well, let us take that up afterwards—the Mexican ores. I was coming to the Cuban, Mexican, and Canadian ores afterwards.

Mr. SELLWOOD. Yes.

Mr. GARDNER. Is there any in Montana and in Idaho and Nevada?

Mr. SELLWOOD. I do not know of any, Mr. Gardner.

Mr. GARDNER. Arizona?

Mr. SELLWOOD. I do not know of any.

Mr. GARDNER. New Mexico? Do you know of any there?

Mr. SELLWOOD. There are some ores in New Mexico.

Mr. GARDNER. How much in New Mexico, would you say?

Mr. SELLWOOD. Oh, perhaps 100,000,000 tons. I have not been there, but I have heard of it.

Mr. GARDNER. A hundred million tons, call it, in New Mexico?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Now, Colorado?

Mr. SELLWOOD. There is some ore in Colorado, but I could not tell you the amount. It is a low-grade ore.

Mr. GARDNER. You can not think of any big deposit west of the Mississippi River, except those I have named?

Mr. SELLWOOD. I do not think of any more.

Mr. REED. How about Texas?

Mr. GARDNER. Well, yes; that is west of the Mississippi River—Texas and Louisiana?

Mr. SELLWOOD. I did not see 50,000,000 tons in Texas.

Mr. GARDNER. Texas and Louisiana together, 50,000,000?

Mr. SELLWOOD. I do not know anything about Louisiana.

Mr. REED. Would you limit Texas to 50,000,000 tons?

Mr. SELLWOOD. No; I say what I know of.

Mr. GARDNER. New Mexico you put at 100,000,000 tons?

Mr. SELLWOOD. Yes.

Mr. GARDNER. And California was 250,000,000.

Mr. SELLWOOD. Yes.

Mr. GARDNER. Texas, 50,000,000?

Mr. SELLWOOD. Yes.

Mr. GARDNER. And Lake Superior, 1,600,000,000?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Wisconsin, 100,000,000—is that right?

Mr. SELLWOOD. Yes, sir. That is the Baraboo district. There is a good deal of what is known as Lake Superior ores in Wisconsin.

Mr. GARDNER. Yes; you referred to the Baraboo district and the other districts outside?

Mr. SELLWOOD. Yes.

Mr. GARDNER. And in Utah there is 1,000,000,000?

Mr. SELLWOOD. Yes.

Mr. GARDNER. And Wyoming, 100,000,000?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Now, we had Texas at 50,000,000. Now, come east of the Mississippi River. What is there in New York State?

Mr. SELLWOOD. There is very little in New York that I know of, as merchantable ore. There is considerable in the Lake Champlain district.

Mr. YOUNG. They concentrate and use a great deal of that?

Mr. SELLWOOD. Part of it they do.

Mr. GARDNER. How much of that is merchantable?

Mr. SELLWOOD. I would not put it to exceed 100,000,000 tons, and I think that is big for it.

Mr. GARDNER. New York, a hundred million tons, outside figures?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Now, then, the Middle States—the other Middle States—Pennsylvania——

Mr. YOUNG. New Jersey.

Mr. GARDNER. Maryland?

Mr. SELLWOOD. I don't know anything about them.

Mr. GARDNER. West Virginia?

Mr. SELLWOOD. I don't know anything about it; but I do know they use Lake Superior ores, and if they had any great supply of ores of their own they would not be using Lake Superior ores.

Mr. GARDNER. Then there is nothing else worth putting in this calculation until we strike Alabama?

Mr. SELLWOOD. Not that I know of.

Mr. GARDNER. Now, in Alabama, how much?

Mr. SELLWOOD. I don't know anything about that district.

Mr. GARDNER. Now, then, certain grades of ore are merchantable in one place that would not be merchantable if situated in another place, I take it.

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. For instance—this is for the sake of the record—in the Lake Superior ores those grading below 55 per cent are not used very much, are they?

Mr. SELLWOOD. No.

Mr. GARDNER. Whereas, the Alabama ores are used as low as what?

Mr. SELLWOOD. I think Mr. Bacon testified 36 or 37 per cent.

Mr. Gardner. 36 or 37 per cent?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Now, this is not because of the difference in the metallic content, but on account of the fact that they have their fluxing materials and coal so near to the furnaces in Alabama?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Am I correct in supposing that it is not because it is a different kind of ore that enables them to use a less metallic ore?

Mr. SELLWOOD. No; it is entirely owing to the small cost of getting the iron and the coal together.

Mr. GARDNER. Of assembling their furnace material?

Mr. SELLWOOD. Yes, sir; that is right.

Mr. GARDNER. In other words, it is not because that particular kind of ore is any easier to convert into pig iron; it is merely because their facilities for blast furnaces are supplied in more economical form by nature?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. To transport that ore and put it where it had to be carried a long distance, like from Lake Superior to Pittsburgh, you could not use that same ore?

Mr. SELLWOOD. No, sir.

Mr. GARDNER. Because the metallic content would not be high enough?

Mr. SELLWOOD. No, sir; you could not haul your ore to Pittsburgh and make pig iron out of it.

Mr. GARDNER. Now, in making these figures you say that in Utah, for instance, there are a thousand million tons of merchantable ore?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Are you contemplating that that shall be reduced to pig iron on the spot, or that it is so rich in metallic iron that it will pay for its transportation to some of the furnaces of the Middle West?

Mr. SELLWOOD. It would have to be transferred to some place or else transfer the coal to it, because there is no coking coal in that district.

Mr. GARDNER. Exactly. Well, now, how rich is that ore in Utah?

Mr. SELLWOOD. That compares very favorably with the Lake Superior ore. I think it will average fully as good.

Mr. GARDNER. And the only reason it is not as valuable a deposit is because it is farther from the market?

Mr. SELLWOOD. Yes; the freight would eat it up.

Mr. GARDNER. Not only from the market where it is to be sold, but from the point of concentration of the materials for the furnace?

Mr. SELLWOOD. Yes.

Mr. GARDNER. I thank you very much for what you have told me so far, and if you think of any State that has a considerable deposit of ore, I wish you would call my attention to it.

Mr. SELLWOOD. I will.

Mr. GARDNER. Now, I have got Canada, Newfoundland, Cuba, and Mexico to inquire about along the same lines.

Mr. REED. Could you add Brazil to that?

Mr. GARDNER. I had not thought of it, but I shall be very glad to add the necessary questions, and any other place where you think ores would be in the reasonable future available for the United States I will be glad to ask about.

Mr. YOUNG. We are importing them from Sweden now.

Mr. BARTLETT. Some in China and some in Egypt.

Mr. GARDNER. I do not want to go ahead with this examination if I am repeating something that we already have.

The CHAIRMAN. Oh, no.

Mr. GARDNER. Either in a Government report or to be secured in any form, but I have not been able to find concentrated the information on this subject. Now, then, do you know about Newfoundland?

Mr. SELLWOOD. I do not.

Mr. GARDNER. What do you know about the Canadian ores? Are you familiar, in part or in whole, with them?

Mr. SELLWOOD. Yes, sir; I think we are producing the only Canadian ore, outside of Newfoundland, that is being produced.

Mr. GARDNER. Where is that?

Mr. SELLWOOD. Moose Mountain, north of Georgian Bay.

Mr. GARDNER. Oh, yes; I saw a picture of it on the map.

Mr. BARTLETT. On the Canadian Pacific road?

Mr. SELLWOOD. No; the Canadian Northern. It is north of the Canadian Pacific. It is about 25 or 30 miles north of the big nickel mines at Sudbury.

The CHAIRMAN. Is Moose Mountain reached by any railroad? Is it on any railroad?

Mr. SELLWOOD. Yes; it is now on the Canadian Northern, built in there three years ago.

Mr. GARDNER. They built in just as they built into Cobalt?

Mr. SELLWOOD. Yes.

Mr. **Gardner** (continuing). And various places where they built in to meet the situation?

Mr. **Sellwood.** Yes.

Mr. **Gardner.** But it is on no trunk line?

Mr. **Sellwood.** No, sir.

Mr. **Gardner.** That is, it is on a branch?

Mr. **Sellwood.** Yes.

Mr. **Bartlett.** Geographically, what part of Canada is it in?

Mr. **Sellwood.** It is directly north of Sudbury.

Mr. **Gardner.** It is about due north of Michigan.

Mr. **Sellwood.** It is due north, almost, of Lake Huron.

Mr. **Danforth.** How far from the lake?

Mr. **Sellwood.** About 60 miles. I think it is a 60-mile haul to the lake.

Mr. **Reed.** It is right close to Georgian Bay, is it not?

Mr. **Sellwood.** Yes.

Mr. **Gardner.** It is in the Province of Ontario?

Mr. **Sellwood.** Yes.

Mr. **Gardner.** I remember on one of those maps pointing to it with a fishing pole. Wasn't Mr. Gates interested up in there?

Mr. **Sellwood.** Yes, sir.

Mr. **Young.** Mr. Gates gave some testimony about it.

Mr. **Gardner.** Yes. Now, how much merchantable ore is there?

Mr. **Sellwood.** The range has not been very thoroughly explored, but I think there—I would say about 100,000,000 tons of merchantable ore, and we know of about 200,000,000 tons of ore that is about 40 per cent. We are getting ready to concentrate that now.

Mr. **Gardner.** Well, you have about 100,000,000 tons of 55 per cent, you say?

Mr. **Sellwood.** Yes; about 55.

Mr. **Gardner.** And about 200,000,000 of 40 per cent?

Mr. **Sellwoood.** Yes.

Mr. **Gardner.** But for the sake of estimating the merchantable ore, ought we not to exclude that 200,000,000 of 40 per cent?

Mr. **Sellwood.** Yes.

Mr. **Gardner.** Therefore I will put Moose Mountain, Ontario, at 100,000,000 tons.

Mr. **Sellwood.** Yes, sir.

Mr. **Gardner.** What other deposits do you know of?

Mr. **Sellwood.** I know of one—Antikocan.

Mr. **Gardner.** Where is that situated?

Mr. **Sellwood.** It is about a hundred miles west of Fort Arthur.

Mr. **Gardner.** That would bring it about due north of Duluth?

Mr. **Sellwood.** Yes, sir.

Mr. **Gardner.** And that is also in the Province of Ontario?

Mr. **Sellwood.** Yes, sir.

Mr. **Gardner.** Western Ontario?

Mr. **Sellwood.** Yes, sir.

Mr. **Gardner.** Now, if you could make a shot at the spelling of that name.

Mr. **Sellwood.** I will have to write it first. Here it is—A-n-t-i-k-o-c-a-n.

Mr. **Gardner.** Antikocan, Ontario. How much is that?

Mr. SELLWOOD. That is a small amount, compared with the others. I would say that would not run over 10,000,000 tons.

Mr. GARDNER. Ten million. Now, is Canada, within a range of a hundred miles of the through line of the Canadian Pacific Railroad, pretty well explored for iron?

Mr. SELLWOOD. I would say it is.

Mr. GARDNER. How about the newly surveyed line of the Grand Trunk Pacific, for instance?

Mr. SELLWOOD. I could not tell you, Mr. Gardner. There is a large amount of low-grade ore on the north shore of Lake Superior, close to the Grand Pacific Railway, for a distance perhaps of 150 miles, but that is all in the low-grade class that we have in Marquette.

Mr. GARDNER. Well, this farther north railroad, which is being built—the transcontinental line——

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Is there anything known about the iron-ore deposits through there?

Mr. SELLWOOD. I do not think there is, Mr. Gardner.

Mr. GARDNER. Along there?

Mr. SELLWOOD. No.

Mr. GARDNER. So that all you know about the iron-ore deposits at Canada is this deposit of a hundred million tons at Moose Mountain and ten millions at Antikocan?

Mr. SELLWOOD. Yes.

Mr. REED. You know about the Dominion Co.'s holdings in Nova Scotia, do you not?

Mr. SELLWOOD. Well, I don't know how much they have. I have never been there.

Mr. REED. That is part of Canada.

Mr. GARDNER. Yes. Now, there is the Dominion Coal & Iron Co. That is in Cape Breton Island?

Mr. SELLWOOD. Yes. I know they are mining and manufacturing there, but I have no idea what amount they have.

Mr. GARDNER. I do not either, and it was largely a Boston concern, too. You haven't any idea, Mr. Reed, have you?

Mr. REED. No. They claim large quantities, but I have never heard the figures.

Mr. GARDNER. Well, we can get hold of that, I fancy. Now, how about Alaska?

Mr. SELLWOOD. I know nothing about it, Mr. Gardner.

Mr. GARDNER. Does anybody?

Mr. SELLWOOD. I suppose so; but I could not tell you who does. There is some iron there I have heard of, but I don't know how much.

Mr. GARDNER. Have you heard there are any deposits of iron ore so rich as to make it possible to transport them to any place of assembling furnace materials?

Mr. SELLWOOD. I do not think so.

Mr. GARDNER. Then we can throw Alaska out of our calculations as to the present merchantable ore supply.

Mr. SELLWOOD. Yes, sir; I think so.

Mr. GARDNER. Now, we are short of information, so far, of Alabama, Nova Scotia, Newfoundland.

Mr. Sellwood. Yes.

Mr. Danforth. Is this Sidney?

Mr. Gardner. Yes. Sidney is in Cape Breton. It is where the Dominion Iron & Steel Co. is situated.

Mr. Danforth. There is another Sidney there.

Mr. Gardner. Well, this is Sidney, Cape Breton Island. Cape Breton Island has a tenuous connection with Nova Scotia, and Sidney is where the vessels sail from to Port aux Basques, Newfoundland. I think that is the only one that I remember. I have not been there, however.

Mr. Sellwood. I think you are right about that.

Mr. Danforth. Where they have the coal and iron ore together just as they are down in Birmingham?

Mr. Gardner. I rather think so. I won't be sure of that, but I should say within rather easy handling distance. I am correct about that, am I not?

Mr. Sellwood. Yes, sir.

Mr. Gardner. What do you know about Mexican ores?

Mr. Sellwood. I don't know anything about them.

Mr. Gardner. You spoke of Lower California.

Mr. Sellwood. Yes; that is true. That is in Mexico.

Mr. Gardner. Well, as to that——

Mr. Sellwood. There are a few small deposits scattered at a great distance, but I do not think you have got 300,000 tons on the whole business.

Mr. Gardner. Then it is not worth calculating?

Mr. Sellwood. Hardly.

Mr. Reed. How about Yucatan?

Mr. Sellwood. I don't know anything about it.

Mr. Reed. That is part of Mexico, is it not?

Mr. Sellwood. I don't know anything about that. I went down in that country about seven years ago for Mr. Gates. He had big reports, but there was nothing there.

Mr. Gardner. Lower Mexico?

Mr. Sellwood. Yes.

Mr. Gardner. If there were any large available ore deposits in Mexico, you would know of them, would you not?

Mr. Sellwood. Yes, sir. I went down there for that purpose. I was down there seven or eight weeks.

Mr. Gardner. I mean all through Mexico.

Mr. Sellwood. I have heard of ore in other parts of Mexico, but I don't know anything about it.

Mr. Gardner. Is it not safe to throw Mexico and Central America out of the calculation of merchantable ore?

Mr. Sellwood. Yes; I think so.

Mr. Gardner. Now, how about Cuba?

Mr. Sellwood. I don't know anything about it.

Mr. Gardner. We have evidence in one of these hearings from Mr. Gayley on Cuban ores.

Mr. Sellwood. I think Mr. Schwab could post you better than anybody I know of on Cuban ores.

Mr. Gardner. Can you post us at all on Brazilian ores?

Mr. Sellwood. No, sir.

Mr. Gardner. Do you know that there are any ores in Brazil?

Mr. SELLWOOD. There are some of our people in Duluth interested in them, and they talk very big about it.

Mr. GARDNER. How big do they talk?

Mr. SELLWOOD. They say it is bigger than the Marquette Range. They are negotiating now, I know, with some people in Germany for the sale of that ore. One of my closest friends is interested in it.

Mr. GARDNER. Have they estimated how much they have got of it?

Mr. SELLWOOD. No.

Mr. GARDNER. Do they think they have two thousand million tons?

Mr. SELLWOOD. Not that I know of.

Mr. GARDNER. Do they think they have a thousand million tons?

Mr. SELLWOOD. No; from their talk I think they estimate about 500,000,000 tons of ore.

Mr. GARDNER. That is their holdings?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Now, then, as to the available ore supplies near at hand, we have exhausted about everything in this computation, except Alabama, Nova Scotia, and Newfoundland, and there is nothing further that you think of that ought to be added in the way of ore resources?

Mr. SELLWOOD. I would judge about Alabama, not knowing myself, but I would judge from the talk I have had with Mr. Bacon that there is a billion tons of ore in the State of Alabama.

Mr. GARDNER. In the State of Alabama?

Mr. SELLWOOD. Yes.

Mr. GARDNER. That is merchantable under present conditions?

Mr. SELLWOOD. I think he reported yesterday that the United States Steel Corporation had about 400,000,000 tons.

Mr. REED. He said that was about one-third in that 15-mile district.

Mr. SELLWOOD. That would bring it up to 1,200,000,000.

Mr. REED. You have not said anything about the Virginia ores, Mr. Sellwood.

Mr. SELLWOOD. I don't know anything about them.

Mr. GARDNER. Now, do you know anything about furnaces?

Mr. SELLWOOD. No, sir.

Mr. GARDNER. Somebody has handed me this memorandum. I am going to ask your opinion about it, and if you have none, all right. [Reading:]

> Each decrease of 1 per cent in iron content of ore raises the cost of producing pig iron 37.5 cents at least, other things being equal.

Mr. SELLWOOD. I would think that is pretty high. Mr. Young has a book there that shows a good deal of that, I think—Crowell & Murray.

Mr. GARDNER. That is assuming other things being equal.

Mr. SELLWOOD. 37 cents per unit?

Mr. GARDNER. 37.5 cents. [Reading:]

> Each decrease of 1 per cent in the iron content of ore raises the cost of producing pig iron 37.5 cents, at least.

Mr. SELLWOOD. That is not so.

Mr. GARDNER. Other things being equal.

Mr. SELLWOOD. I know that we have a penalty where our ore runs below 55.

Mr. GARDNER. What?

Mr. SELLWOOD. We have a penalty where our ore runs below 55 of about 7 or 8 cents a unit, and we also have a premium if it goes above.

Mr. GARDNER. Yes.

Mr. SELLWOOD. I am talking now as a seller of ore.

Mr. GARDNER. I see.

Mr. SELLWOOD. Take 37.5 cents and a 55 per cent ore and you would see where it would bring your pig iron.

Mr. GARDNER. It seems to me there was a penalty in the Hill lease for the nonstandard ore. What was the standard of the Hill ore?

Mr. REED. Forty-nine was the lowest mentioned.

Mr. GARDNER. Dry ore was 59, was it not?

Mr. SELLWOOD. Yes. They figure 55 on Bessemer ore and 51.5 on non-Bessemer ore.

Mr. REED. That is not dry, though.

Mr. SELLWOOD. No; natural.

Mr. GARDNER. The Hill lease was in terms of dry ore.

Mr. SELLWOOD. Yes; I think so. That is right.

Mr. GARDNER. Well, now, I would like to get at your opinion.

Mr. SELLWOOD. They charge us, I know, a penalty of about 8 cents per unit. Now, if it costs them 37 cents per unit more to make pig iron they certainly would charge us the difference. Mr. Young has a book some place that shows it.

Mr. GARDNER. I would like to elucidate this a little further. I put some confidence in the accuracy; I may mistake the basis of this, or you may mistake the basis of it, but I put some confidence in the gentleman who prepared that.

Mr. SELLWOOD. Well, you see, Mr. Gardner, if you take a 55 per cent natural iron and take 37.5 cents per unit, you will get a unit of how much your pig iron will cost to make?

Mr. REED. Mr. Sellwood is talking about the increased cost per ton of ore, while that memorandum seems to refer to the increased cost per ton of pig iron. Perhaps that explains the difference.

Mr. GARDNER. But even that would not account for the difference, even if you divide it by three.

Mr. SELLWOOD. No.

Mr. GARDNER. This is calculated on the basis, I think, of about $10 for producing a ton of pig iron. I am not sure of it, but that is my impression.

Mr. SELLWOOD. Well, I know they penalize us about 8 cents per unit.

Mr. GARDNER. Well, you would have to multiply that by three, would you not?

Mr. YOUNG. No; by two.

Mr. GARDNER. Yes, that is right; by two.

Mr. SELLWOOD. Yes.

Mr. GARDNER. While you are getting at the explanation there, I presume you know who gave me this memorandum, Mr. Reed?

Mr. REED. I have just been told. I did not know before.

Mr. GARDNER. The memorandum was in confidence, and I can not put the man on the stand without his own consent. It is out of the question; but I will talk to Mr. Reed about it later. If you were going into the business of manufacturing steel, and by that I mean finished and semifinished and ore crude—I do not mean steel products, but I mean the rougher or coarser forms of steel—and wanted to get in on a competitive basis with these concerns now in the business, how much of an ore reserve would you like to have? You remember the question that was asked Mr. Bacon yesterday—substantially the same question?

Mr. Reed. You mean expressed in terms of years?

Mr. Gardner. It was expressed yesterday in Mr. Bacon's answer in terms of million tons. He figured out and gave an answer, and I wanted to get Mr. Sellwood's idea.

Mr. Sellwood. That would depend a good deal, Mr. Gardner, on how much money I had to spend in the plant—how big a plant I was going to build.

Mr. Gardner. Yes; but we are assuming that the plant would be big enough to be on a competitive basis with other concerns now in the business—the minimum to put you on a competitive basis. The object I have in asking that question is to see whether there is an opportunity, outside of making an arrangement with Mr. Hill for his ores, for an independent steel company to do business. Mr. Bacon was asked that question, and now I want to go on further on the same line with Mr. Sellwood.

Mr. Sellwood. In the first place, Mr. Bacon has had a good deal of experience as a manufacturer with the Tennessee Coal & Iron Co. I know nothing about manufacturing. My whole life has been spent in mining, and I would have no idea of what a plant would cost.

Mr. Gardner. What?

Mr. Sellwood. I would have no idea what a big steel plant with furnaces would cost.

Mr. Gardner. I thought possibly you might feel that you were not prepared to answer the question.

Mr. Sellwood. No; I am not.

Mr. Gardner. I have no other questions to ask, and between now and the time we meet after lunch, why, I will be——

Mr. Young. Just a question or two there, Mr. Sellwood. These estimates that you have given to Mr. Gardner relate to ores that are known to exist, do they not?

Mr. Sellwood. Yes, sir.

Mr. Young. Now, if in 1885 you had been asked if there was any iron ore on the Mesabi Range you would have had to answer, would you not, that you did not know of the existence of any there?

Mr. Sellwood. Yes, sir.

Mr. Young. I see in this report of Mr. C. K. Leith on the iron-ore reserves of Michigan in 1911 it is stated that on the Michgan iron range in the Lake Superior district there are larger reserves of ore in proportion to the annual shipments, which have steadily increased, known to exist than at any previous period in the history of that district. Would your judgment accord with that statement?

Mr. Sellwood. No.

Mr. Young. What?

Mr. Sellwood. No.

Mr. Young. It speaks of reserves which are known to exist—reserves which are shown up; in other words, that there is more ore now shown up than was known at any previous period, although large amounts have been taken out, of course—219,000,000 tons.

Mr. SELLWOOD. I don't know but what I would agree with that pretty near, because that district down there that has been opened here in the last few years has shown a large amount of ore.

Mr. YOUNG. They began shipping and mining ore there in 1855, did they not?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. When the deposits are of the character of those in Michigan—these deep deposits—wouldn't it be your judgment that that would probably be true in many other ranges; that in 50 years you would know of more ore than we do to-day, although they were mining it each year?

Mr. SELLWOOD. I would say that is apt to be so in any of the ranges except the Mesabi. The Mesabi is different, because that is flat, and they have drilled right through the ore.

Mr. YOUNG. So in the statement you have made in answer to Mr. Gardner's question you would not thing that because you only knew of so much ore to-day that there was any reason to believe that there would not be immense discoveries in the next 10 or 20 or 50 years?

Mr. SELLWOOD. No.

Mr. GARDNER. That is to say, because you know only of these amounts that you have given Mr. Gardner to-day, you would not think that was any reason to believe that there would not be immense discoveries in the next 50 years of other ores unknown to anybody to-day?

Mr. SELLWOOD. I think it is quite probable there would be.

Mr. GARDNER. You think it is quite probable that there would be large discoveries of what we call to-day merchantable ore in the foundries of the United States in the next 50 years?

Mr. SELLWOOD. Yes, sir. I went to the Marquette district in 1870, when the total shipments were about half a million tons a year. I think they are shipping now from three to four million tons a year out of that same district.

Mr. GARDNER. Where would you anticipate these discoveries would be made?

Mr. SELLWOOD. The continuation mostly of those old mines down.

Mr. GARDNER. Deeper in the ground?

Mr. SELLWOOD. Yes, sir. They are not explored as the Mesabi Range is explored.

Mr. GARDNER. I quite understand. On the Mesabi you can see just what you have got beyond peradventure of a doubt?

Mr. SELLWOOD. Yes.

Mr. GARDNER. But you would suppose that within the next 50 years there would be great discoveries of merchantable ore?

Mr. SELLWOOD. In the old mines of Michigan?

Mr. GARDNER. In the old mines of Michigan.

Mr. SELLWOOD. Yes.

Mr. GARDNER. Now, anywhere else in the United States?

Mr. SELLWOOD. Possibly the Vermilion.

Mr. GARDNER. Possibly the Vermilion?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Now, how much would you anticipate the discovery in the next 50 years would be? Do you think by any possibility there would be the discovery of a thousand million tons?

Mr. SELLWOOD. Not that much in the Lake Superior district, because the real Lake Superior district is small compared to the Mesabi, which I think is very well developed.

Mr. GARDNER. What?

Mr. SELLWOOD. I say the Michigan mining districts are small compared with the Mesabi, which I think is very well developed.

Mr. GARDNER. Now, would you not be surprised if in the next 25 years, we will say, 200,000,000 tons of merchantable ore were discovered in the whole United States?

Mr. SELLWOOD. 200,000,000?

Mr. GARDNER. 200,000,000 tons of merchantable ore?

Mr. SELLWOOD. No; I would not be surprised at that.

Mr. GARDNER. How about 500,000,000 in the next 25 years?

Mr. SELLWOOD. Well, that is going a good way, but it may be so.

Mr. GARDNER. That would rather surprise you, would it?

Mr. SELLWOOD. It would; yes.

Mr. GARDNER. Well, then substantially——

Mr. SELLWOOD. But we are certainly mining more in Michigan today than we ever did before.

Mr. GARDNER. There is apparently a difference between what you have stated to me and your answers to Mr. Young. Now, am I right in saying that that difference arose for this reason, that in answering Mr. Young you had in mind future discoveries in the old Michigan mines and possibly in the Vermilion, in Minnesota?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Where the deposits are of such a nature, because they are vertical, that you do not know how deep they go?

Mr. SELLWOOD. Yes.

Mr. GARDNER. And you anticipate that future discoveries in those regions will be not discoveries on the surface, but discoveries deeper below the surface in the old localities already worked?

Mr. SELLWOOD. Yes, sir. In other words, I think it is fair to say that I believe that in 20 years from now the mines of Michigan, and especially of the Ishpeming and the Negaunee districts, will have as much ore in sight as they have got now, and they will continue shipping just as they have been. That whole Nagaunee district, outside of Jackson, has been found in the last 20 years.

Mr. YOUNG. In the last few years the Swanzey district has opened up, although we have known there was ore there for 30 or 40 years.

Mr. SELLWOOD. Yes; they were shipping in 1873.

Mr. YOUNG. But in very small quantities?

Mr. SELLWOOD. Yes.

Mr. YOUNG. But the practical development has been in the last five years, has it not?

Mr. SELLWOOD. Yes.

Mr. YOUNG. Then, take the district west of Ishpeming on the north range, we have been exploring for ore and finding small quantities for more than 20 years, have we not?

Mr. SELLWOOD. Yes.

Mr. YOUNG. But still is it not true that we never found a paying mine until within the last three years?

Mr. SELLWOOD. Yes.

Mr. Young. And that now——

Mr. Sellwood. Well, now, I would not say that. You had the old Cleveland amatite there.

Mr. Young. Yes; but I was not thinking of that. I was speaking of the portion west of Ishpeming.

Mr. Sellwood. Yes.

Mr. Young. The old Cleveland is right in there.

Mr. Sellwood. Yes.

Mr. Young. And now we have opened up at least two very large properties there.

Mr. Sellwood. What mines do you refer to?

Mr. Young. I mean the Cleveland-Cliffs property and the property that J. R. Thompson has charge of—the Hanna.

Mr. Sellwood. That is the old American mine?

Mr. Young. Yes, sir.

Mr. Sellwood. That is the same mine they worked over 20 years ago.

Mr. Young. Very true; but it was a small mine and was not profitable.

Mr. Sellwood. Well, that is more in the method of mining than anything else. It is the old Boston and old American mines. They shipped from there over 20 years ago——

Mr. Young. Yes.

The Chairman. If it is agreeable to the committee we will take a recess now until 2 o'clock.

Whereupon, a recess was taken until 2 o'clock p. m.

AFTER RECESS.

The committee reconvened pursuant to adjournment.

FURTHER STATEMENT OF MR. JOSEPH SELLWOOD.

Mr. Young. Mr. Sellwood, returning to this question of the probable amount of ore available in the United States and accessible in the United States, if you had been asked 10 years ago whether there was any large amount of iron ore in Cuba, outside of the Santiago district—the old district—what would your answer have been?

Mr. Sellwood. Well, I had never heard of any at that time.

Mr. Young. Yes. Have you any more reason to think to-day that there will be no more large discoveries of ore in the United States, or accessible to the United States, that can be used here than you would have had 10 years ago to say that there was no ore in Cuba, outside of the Santiago district, to your knowledge?

Mr. Sellwood. No.

Mr. Young. Don't you think it extremely probable that with the thorough explorations, which will go on in the next 50 or 60 years, that very large deposits will be found entirely outside of the Lake Superior district?

Mr. Sellwood. Yes; they are doing that now on the Cayuna Range. A few years ago they never knew anything about it.

Mr. Young. Say, three years ago you had not found much of anything over there, had you?

Mr. Sellwood. No.

Mr. Young. That has been growing pretty rapidly in the last year—the discoveries?

Mr. Sellwood. Yes; within the last two or three years a good deal of ore has been discovered there.

Mr. Bartlett. You spoke about ores in Canada, Mr. Sellwood. What place was it? Sellwood did you first speak of? Along north of Michigan there?

Mr. Sellwood. Well, it is located at a little village—Sellwood—called after me. It is about 25 miles north of Sudbury.

Mr. Bartlett. Yes.

Mr. Sellwood. That is where the large nickel mines are—Sudbury?

Mr. Bartlett. The last-named village is in Canada?

Mr. Sellwood. Yes; Ontario.

Mr. Young. That is pretty nearly straight north of the east end of Lake Superior, is it not?

Mr. Sellwood. Well. it is directly north of Georgian Bay, right on Lake Huron.

Mr. Bartlett. Not in the region of Medicine Hat, or anything of that kind?

Mr. Sellwood. Oh, no.

Mr. Bartlett. To the east?

Mr. Sellwood. To the east. Directly north of Georgian Bay.

Mr. Bartlett. How much do you think is there, Mr. Sellwood?

Mr. Sellwood. Oh, there is considerable ore shown up there.

Mr. Bartlett. Now, Mr. Sellwood, you say that in 50 years you can not tell, of course, how much more ore will be found than at the present time as a matter of course?

Mr. Sellwood. No, sir.

Mr. Bartlett. Do you think the present known supply is sufficient to supply all the demands of this country?

Mr. Sellwood. When you take the different grades of ore, yes; but we are going to find more. You can not help it.

Mr. Bartlett. What?

Mr. Sellwood. We are going to find a good deal more. The Marquette Range has been mined for 50 years, and they show a great deal more to-day than they did 20 years ago.

Mr. Bartlett. How long have they been working the Marquette Range?

Mr. Sellwood. About 55 years.

Mr. Bartlett. And how have the facilities for getting out the ore increased in that time?

Mr. Sellwood. Oh. it has improved a great deal. When I went there first, in 1870, we used to mine with hand drills and black powder. Now they have power drills and dynamite, and in some places steam shovels.

Mr. Bartlett. And human ingenuity is liable to invent some other means of more rapidly or efficiently getting it out, is it not?

Mr. Sellwood. Yes, possibly; but they have made a great many improvements. They can hardly improve on the steam shovels. They handle the ore very cheaply now.

The Chairman. The steam shovel is confined to the open-pit mines?

Mr. SELLWOOD. Yes; the open-pit mines and the stock piles of all the old ranges. That is handled by steam shovels, too.

Mr. BARTLETT. Have you stated whether or not you are familiar with the extent and character of the ore in the Birmingham district, Mr. Sellwood?

Mr. SELLWOOD. I am not. I don't know anything about it.

Mr. BARTLETT. You are not familiar with the plant of the Tennessee Coal & Iron Co. and their business there before——

Mr. SELLWOOD. Nothing whatever.

Mr. BARTLETT. You are not troubled, then, with the idea that the ore supply of this country is to be depleted in 40 years, are you?

Mr. SELLWOOD. No. You will make a big hole in the Mesabi Range in the next 40 years. That is where the large amount of high-grade ore is, because that is a flat formation, and it is very well explored. They know about all they have there, but in the older ranges, where they have the vertical veins, they do not know so much about them. They keep finding ore as fast as they take it out.

Mr. BARTLETT. I did not hear your answer to Mr. Gardner's question, and I don't know whether you answered it or not; I mean to say, I don't know whether you undertook to answer it or not; that if you contemplated entering into the steel-manufacturing business now—at this day—what amount of reserve ore would you have? I understood you did not answer that, I believe.

Mr. SELLWOOD. I did answer it—in a way. I told him that I did not know anything at all about the furnace or steel business or how much it would cost to build a plant.

Mr. BARTLETT. Or how much ore it would take one to run a year?

Mr. SELLWOOD. It would depend on the size of the plant, and that would be controlled entirely by the amount of money you could get together to build a plant.

Mr. BARTLETT. Yes.

Mr. SELLWOOD. You could build a plant with 1,000-ton capacity a day or 20,000 tons a day, but I know nothing about the manufacturing part of it.

Mr. YOUNG. You are an iron-ore man, pure and simple?

Mr. SELLWOOD. Yes. Have been a miner, Mr. Young, and never manufactured any, so that anything I might say in regard to manufacturing would be hearsay.

Mr. BARTLETT. You think a man or a corporation or an association of men who had the money, the means and the desire to enter into the manufacture of steel and iron and their products, that are made from iron ore, would find ample ore to carry on the business under the present conditions?

Mr. SELLWOOD. I do. I think it is a question of price. A good many of the small operators would be glad to sell, and there is a good deal of ore that is in the open market. I, myself have mined a good deal of ore just to sell, and have no furnace connections at all.

Mr. BARTLETT. Now, would not—whether or not that business could be successfully carried on, even with a reasonable amount or an unlimited amount of capital, say $25,000,000—men who are able to furnish the money necessary to carry on the business they undertake—would it not depend upon some other things except the finding of the ore and being able to purchase it? Would not the transportation come into consideration there?

Mr. SELLWOOD. Yes; but anybody can transport. They can get the same freight rate right along.

Mr. BARTLETT. Do you think they could?

Mr. SELLWOOD. Oh, I think so.

Mr. BARTLETT. Well, do they at the present time?

Mr. SELLWOOD. Freights? Yes. The independents have the same freights in our district. I don't know anything about anywhere else.

Mr. BARTLETT. If, as is true practically in this case—I suppose it can be taken as an accepted fact that the United States Steel Corporation, which is said to be and doubtless is the greatest industrial giant or organization in the world, has not only the amount of ore, at its control that it has, both owns it and by leases, but has, by reason of owning as part of its subsidiary companies, transportation companies, railroad companies, steamship companies, and docking privileges, and things which the independents or men who now might desire to engage in business could not at once obtain—would not the new organization or new business be at a disadvantage with men who are engaged in business to-day in that way?

Mr. SELLWOOD. I do not think so.

Mr. BARTLETT. Do you not think that a corporation——

Mr. SELLWOOD. The United States Steel Corporation, as far as I know of, has no railroads in Marquette or Menominee or Gogebic, and pays the same rate of freight and the same rate of dockage as any independent company, I do not care how small it is. That is true as far as those ranges are concerned. They do own two railroads into the Missabe, and Mr. Hill owns one, the Great Northern. I ship most of my ore over the Great Northern, but some of it over the Duluth, Missabe & Northern, and the Duluth & Iron Range, and we pay the same price to Hill that we do to the others.

Mr. BARTLETT. Do you not think that a new concern with ample means, and which would have to go in and buy this ore either in fee or by lease, and which had to pay freight, even the same freight as other people who are independent——

Mr. SELLWOOD. Yes, sir.

Mr. BARTLETT (continuing). Would suffer any disadvantage.

Mr. SELLWOOD. I do not think so. Jones & Laughlin is one of the big manufacturers in this country. They transport all of their ore from the Missabe Range over one or the other of the three roads; the Great Northern, the Duluth & Iron Range, or the Duluth, Missabe & Northern. Both of the latter are owned by the Steel Corporation. They have no trouble. They all have the same freights and the same service. They pay so much a ton from the mines into the boats, and the railroad company furnishes the dock and loads it from the dock into the boats, and they have no better chance than the small independent operator, who has got to sell his ore. We can get all the cars we need.

Mr. BARTLETT. Where is Jones & Laughlin's business situated?

Mr. SELLWOOD. Pittsburgh.

Mr. BARTLETT. Pittsburgh?

Mr. SELLWOOD. Yes. The Lackawanna Steel have all the same privileges. They are located at Buffalo. They pay as much per ton for the ore, as if they only shipped 50,000 tons a year.

Mr. BARTLETT. Don't you know there is some sort of an agreement or understanding with the railroads and some of the independents in that particular region by which the rate of freight is fixed and agreed upon?

Mr. Sellwood. There is none that I know of. I have operated since the railroad was built, as an independent operator. I never got any rebate or heard of any.

Mr. Bartlett. I did not say "rebate."

Mr. Sellwood. I never heard of it. We have paid just a straight 80 cents a ton for every ton of ore that has gone out of the Mesabi Range and a dollar a ton from Ely. Ninety cents is the price at Tower, but there are no mines there except the United States Steel Corporation mines.

The Chairman. Do you know whether Jones & Laughlin have any railroads or not?

Mr. Sellwood. They have no railroads in that country; no.

The Chairman. Do you know whether they have railroads at Pittsburgh or around Pittsburgh or not?

Mr. Sellwood. I could not say. I understand that Jones & Laughlin own a half interest, along with the Cleveland-Cliffs, of a short line about 15 miles from Marquette.

Mr. Young. Eighteen miles.

Mr. Sellwood. Yes.

The Chairman. Then they own steamships, do they not?

Mr. Sellwood. Yes, sir.

The Chairman. And they are only dependent on the railroads carrying the ore from the ranges in Superior to the lake, and after that they are independent?

Mr. Sellwood. Yes, sir.

The Chairman. By virtue of the fact that they own their own steamship lines?

Mr. Sellwood. Yes.

The Chairman. And that that steamship haul is to Buffalo, which is on the lake?

Mr. Sellwood. Yes; that is true with almost all the independent operators. They have their own boats.

The Chairman. Now, if an independent operator should start now, in order to be on anything like an even footing with these other fellows, wouldn't he have to get him a boat line?

Mr. Sellwood. Not necessarily so. There are plenty of boats on the Lakes.

The Chairman. But that would be part of his necessary expense in starting in the steel business now; he would have to get a line of steamships?

Mr. Sellwood. Oh, no; you could get plenty of independent boats.

The Chairman. I understand that; but to haul at a price comparable to these other fellows he would have that to do, to be on a level footing or even keel with them?

Mr. Sellwood. I suppose the United States Steel Corporation makes some profit off the boats, just the same as other people. I happen to own one or two myself, and I know there is very little profit at the present prices.

Mr. Young. Don't you think this last year a fellow would have found it a good deal cheaper to have hired some other boat and paid the regular rates of freight than to own boats himself for that year?

Mr. SELLWOOD. Well, I would not say that, Mr. Young, because I made a little money off of my boats. The great trouble is that most of the boats are bonded, and they have to pay the interest on the bonds and take up so many of the bonds that a 6-per-cent rate is a very small rate. It is a living rate, and that includes the unloading at the lake port.

Mr. BARTLETT. The Steel Corporation when it was organized took over or owned a number of transportation companies, including railroads and steamship lines, did it not?

Mr. SELLWOOD. I think it did.

Mr. BARTLETT. Do you suppose it would have done that if it had not thought it would give them an advantage in securing that kind of property?

Mr. SELLWOOD. It did.

Mr. BARTLETT. If they could have been on an equal footing in the matter of transportation from the mines to their works, and if it was a mere matter of freight, would it have been good policy to invest money in railroad lines and steamship lines also?

Mr. SELLWOOD. Yes. Most all of the big consumers went to work to build boats, because they can make money out of them. I have seen $2 a ton freight paid from Duluth to Lake Erie when the ore was sold at $2 a ton, and I have seen the rate as high as $2.87—not for a year, but for the wild cargoes in the fall.

Mr. BARTLETT. You do not consider this ownership of railroads by the Steel Corporation from the mines to the lake ports, and boat lines from the lake ports down to their place of business, is any material advantage to them in the matter of manufacturing their product?

Mr. SELLWOOD. I certainly do think it is an advantage to them. They get their freight on the railroad at cost. The independent operator has got to pay them 80 cents. They have a big advantage on the freight.

Mr. BARTLETT. And that goes back into the pockets of the Steel Corporation?

Mr. SELLWOOD. Yes.

Mr. BARTLETT. And what they charge other people as well?

Mr. SELLWOOD. Yes; they have a great advantage in freight; there is no question about that. That is not so regarding the boats, because most all the operators have their own boats to handle part of the ore, anyway.

Mr. BARTLETT. I will ask you a question, and I do not know whether you want to answer it or not, or whether you have thought about it, but do you think it is wise public policy that great industrial corporations engaged in the manufacture of necessary and useful products, like the products of iron and steel, and so forth, should also be engaged in the transportation business?

Mr. SELLWOOD. Why——

Mr. BARTLETT. I do not mean—I mean the transportation business; to own railroads and other transportation facilities, and come in competition with the other transportation companies, and in competition with other producers of the same kind of products?

Mr. SELLWOOD. I see no objection to it, as long as they make a fair rate. Now, you take all the ranges—they are independent railroads except this one—and I know we get just as good service on the Mesabi Range as we get from the railroads in the other ranges that have no interest whatever in the mines.

Mr. BARTLETT. So you see no bad public policy in permitting that to be done. If it could be corrected by law in order that the public might get the benefit of proper competition in the sale of good, do you think it should be permitted?

Mr. SELLWOOD. I would say that I have no objection to it as long as they give me the same rate that an independent railroad would give me. If the United States Steel Corporation would haul their ore at 60 cents a ton, as they now propose to do.

Mr. BARTLETT. What are they handling it at now? At 80 cents?

Mr. SELLWOOD. Yes; but I understand the rate is to be reduced this year.

Mr. BARTLETT. Now, how long has the 80-cent rate been in existence?

Mr. SELLWOOD. Ever since the range started.

Mr. REED. That was 1893?

Mr. SELLWOOD. Well, it started there on the iron range in 1884, on the Vermilion. It has been the same rate ever since. There was a time when they had a great deal of money to spend building their roads, and one thing and another, and they had very little ore to handle, when the rate was not any too high, but I do think it has been excessive for some time.

Mr. BARTLETT. That is, has been excessive?

Mr. SELLWOOD. Yes.

Mr. BARTLETT. Is it the same rate as is charged by other railroads for like service in that locality—for the same hauls and distance and the same service?

Mr. SELLWOOD. No. I think for the last few years they have charged more per mile, perhaps, than the Chicago & North Western or Wisconsin Central—more per ton per mile. They have a 40 or 45 mile haul from Ashland, and they were doing it for 40 cents. At the same time, when I went into Ashland in 1885, we paid $1.25 a ton for hauling that 40 miles.

Mr. BARTLETT. If you had to haul it by wagon, you would have to pay more?

Mr. SELLWOOD. Yes. In the early days on the Marquette Range we paid $1.50 for 15 miles. Things have changed.

Mr. REED. That is railroad, too?

Mr. SELLWOOD. Yes.

Mr. YOUNG. This was railroad at Ashland, also?

Mr. SELLWOOD. Yes. Then, when the Wisconsin road came in, they cut it to 80 cents, and in the panic of 1893 they cut it to 40 cents, and it has been that ever since, but all those roads charge more when they get into a country first. For instance, this Iron Range Railroad——

Mr. YOUNG. By the "Iron Range," you mean the Duluth & Iron Range?

Mr. SELLWOOD. Yes; the Duluth & Iron Range, up to the time that the Missabe Range was discovered—up to 1892 their train was 19 cars, hauling about 20 tons each. Now, they haul about 65 cars and 50 tons each.

Mr. BARTLETT. They have bigger engines?

Mr. SELLWOOD. Bigger engines and greater capacity cars.

Mr. Bartlett. The Steel Corporation Railroad is the Missabe & Duluth?

Mr. Reed. The Duluth, Missabe & Northern is one, and the Duluth & Iron Range is the other.

Mr. Bartlett. Do you know anything about the number of cars they haul?

Mr. Sellwood. Now?

Mr. Bartlett. Yes.

Mr. Sellwood. I think they haul 60 to 65 cars, but I have ridden on that road when I could walk a good deal faster than they were hauling, when they first built it. For 20 miles you could not see the track at all. It was all under water. They were not hauling 65 cars then; then they were hauling 10 or 15.

Mr. Danforth. We have been told that these two roads are all down hill from the Missabe Range; that you can give them a push and they will run down to the ore docks.

Mr. Sellwood. Well, the grade is in its favor. There is no doubt about that; it is mostly all down grade. I think that the Hill Road, with some of those Mallet engines, hauled as many as 125 cars to the train.

Mr. Danforth. That is on the Hill Road?

Mr. Sellwood. Yes; but they have discarded all of those big engines and are cutting down the trains. They found they broke the cuplings on the upgrades.

The Chairman. They used those big engines on the back haul up that grade from Duluth to Proctornott?

Mr. Sellwood. Yes; that is on the Missabe & Northern. The Hill used to run them, but they have taken them all off of the western division.

The Chairman. Your back haul on the Duluth, Missabe & Northern would measure the size of your load going down, or your load coming back would measure the load capacity?

Mr. Sellwood. It is just a question of taking them back. The grade is all in their favor going down.

The Chairman. You can bring as many cars down as you can take back?

Mr. Sellwood. That is just about what they do.

The Chairman. That Muskage Swamp is an incline plane gradually tilting toward the lake?

Mr. Sellwood. Yes.

The Chairman. I have been over that road, and the tracks are almost on a level until you get the line from mines to Proctornott.

Mr. Sellwood. Yes. You get a little ice pot once in a while, but it does not change the grade but very little.

Mr. Young. How about getting on to the dock, Mr. Sellwood?

Mr. Sellwood. Well, there is no trouble on the Missabe & Northern to get in onto the dock, because they come in on the side hill.

Mr. Young. It is up grade there?

Mr. Sellwood. No.

Mr. Young. How is it at Two Harbors?

Mr. Sellwood. Pretty near the same. They come in off the side hill. They get on the dock on a level. That is not quite true with the Great Northern. They have to come up with it, but the grade is very slight.

Mr. YOUNG. How about the Superior Dock?

Mr. SELLWOOD. That is what I mean by the Great Northern. They raise a little there; not much.

Mr. YOUNG. I am through.

The CHAIRMAN. Do you wish to ask any questions, Mr. Gardner?

Mr. GARDNER. No.

The CHAIRMAN. Mr. Sellwood, you spoke of the Merritts offering some company a controlling interest in their holdings for a million and some odd dollars. I did not catch that exactly.

Mr. SELLWOOD. It is about a million and a half. That is the time Mr. Rockefeller bought them. That was in January or the first of February, 1894.

The CHAIRMAN. That million and a half——

Mr. SELLWOOD. Was for the control.

The CHAIRMAN. For the entire property or 51 per cent?

Mr. SELLWOOD. Fifty-one per cent.

The CHAIRMAN. That was just prior to the time Mr. Rockefeller took the properties over?

Mr. SELLWOOD. Yes.

The CHAIRMAN. But not prior to the time he had certain dealings with the Merritts in the way of lending money?

Mr. SELLWOOD. I had dealings with them for about a year prior to that time, in January, 1893.

Mr. REED. You had, or Mr. Rockefeller?

Mr. SELLWOOD. No; I had, for the Minnesota Iron Co.

The CHAIRMAN. How is that?

Mr. SELLWOOD. It was for the Minnesota Iron Co. I was acting.

The CHAIRMAN. The Minnesota Iron Co. did not take those properties over at that time?

Mr. SELLWOOD. No.

The CHAIRMAN. They refused to take them over because they thought the price of a million and a half for the holdings of the Merritts and the railroad was an excessive charge for 51 per cent?

Mr. SELLWOOD. No; but they did not take it over because they did not know where to get the million and a half.

The CHAIRMAN. It was a time that, no matter what the property may have been worth, at that time nobody was letting any money go?

Mr. SELLWOOD. No. The Duluth & Iron Range did not have it to let go.

The CHAIRMAN. Did you consider that a valuable property?

Mr. SELLWOOD. I certainly did.

The CHAIRMAN. Did you ever make any offer on that property for the Minnesota Iron Co. prior to the time it was offered to you at a million and a half for 51 per cent.

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. What offer did you make, and to whom?

Mr. SELLWOOD. I made them an offer at the rate of $7,000,000 for the whole thing.

The CHAIRMAN. For what?

Mr. SELLWOOD. For the whole of the property—that is, the railroad and all the mines.

The CHAIRMAN. You offered them $7,000,000?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Who were you purchasing it for at that time?

Mr. SELLWOOD. For the Minnesota Iron Co. and the Duluth & Iron Range.

The CHAIRMAN. Did you regard that as a wise purchase, to take over those properties at $7,000,000?

Mr. SELLWOOD. I did.

The CHAIRMAN. Would they listen to that proposition at that time?

Mr. SELLWOOD. The Grants, Chases, and Senator Clapp—there were three factions. There was the Merritts and Senator Foley, and the Chases and Grants, and a party by the name of M. B. Harrison. I had my dealings with Mr. K. D. Chase, and I made him that offer, and he submitted it to the Merritts, and the Merritts accused him of trying to sell them out; they said the road and property was worth a good deal more than that and that they did not want to sell it anyway; but Chase's associates all wanted to get out.

The CHAIRMAN. But the Merritts would not take $7,000,000?

Mr. SELLWOOD. No; the Merritts and the Harrisons would not take it. The Merritts did not have the control themselves, but they and the Harrisons and the Chases and the Grants had the control.

The CHAIRMAN. And they refused to take that offer?

Mr. SELLWOOD. Yes; they refused to take it.

The CHAIRMAN. Now, take the road of the Duluth, Missabe & Northern; is it worth $7,000,000?

Mr. SELLWOOD. It is now.

The CHAIRMAN. What gives it that value?

Mr. SELLWOOD. The ore back of it; the enormous tonnage.

The CHAIRMAN. And the thing that makes it such a valuable property is not the length of the road?

Mr. SELLWOOD. No.

The CHAIRMAN. Nor the cost of its construction?

Mr. SELLWOOD. No.

The CHAIRMAN. But its peculiar location, by which it is enabled within a few months of the year to handle such a dense and profitable traffic?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. And it had that advantage then, I presume, as well as now?

Mr. SELLWOOD. It did. The road, of course, was not completed, as it is now.

The CHAIRMAN. It was not ballasted like it is now?

Mr. SELLWOOD. Oh, no.

Mr. YOUNG. It was not all built, was it?

Mr. SELLWOOD. It was all built to Mount Iron and Hibbing.

The CHAIRMAN. It connected with another road and did not run into Winnipeg?

Mr. SELLWOOD. No; it did not.

The CHAIRMAN. And at the time you made the offer of $7,000,000, it did not run to the docks?

Mr. SELLWOOD. No; it ran to Stony Brook, and then connected with the other road.

The CHAIRMAN. The road was completed and they had issued bonds for it?

Mr. SELLWOOD. Yes.

The CHAIRMAN. How much more valuable would you say the road would be with its docks and running into Duluth than the old road, tapping the Winnipeg road at Stony Brook?

Mr. SELLWOOD. I could not answer that, because I don't know what their arrangement was at Stony Brook. If they had to pay half of the freight, of course, that would be worth twice as much if they had their own railroad to the dock.

The CHAIRMAN. It would depend on that contract?

Mr. SELLWOOD. Yes.

The CHAIRMAN. I think we have it. Now, Mr. Sellwood, you were speaking of this Utah ore. It is a 60 per cent ore, I believe?

Mr. SELLWOOD. Yes, sir. There is a great deal of iron in it. Very little of it is lower.

The CHAIRMAN. It is in vertical veins?

Mr. SELLWOOD. Yes.

The CHAIRMAN. What is the width of those veins?

Mr. SELLWOOD. Oh, some places they are seven or eight hundred feet wide.

The CHAIRMAN. Now, I have heard it somewhere, and I have not thought of it before in 20 years, but I have an indistinct recollection, when I used to meddle in geology a little, that that ore was like a dike; it was very hard—that Utah ore.

Mr. GARDNER. Like a what?

The CHAIRMAN. Like a dike and it was very hard and calcitrant ore to mine. That is my dim recollection of reading about the Utah ores.

Mr. SELLWOOD. It is a hard ore; yes.

The CHAIRMAN. I think it was Le Compe or somebody else I was reading on the subject, and at that time—I am not stating this as a fact, because it is only a dim recollection—but my recollection is that at that time this author—and I think it was Le Compe—gave as a reason for the failure to mine this ore; to utilize it, among other things, that its excessive hardness rendered it like some of the copper deposits in the Lake Superior district at that time, so firm and tough, so near like solid iron, that you could not blast it or get it out.

Mr. SELLWOOD. Well, it is just identical with the ore at the Tower Mine and at the Republic and the old Cleveland-Cliffs. Formerly 95 per cent of the ore shipped from the Lake Superior district was a hard ore, but now 95 per cent of it is soft ore.

The CHAIRMAN. Is that a more expensive proposition to mine?

Mr. SELLWOOD. Oh, yes. This ore will carry about 1 or 1½ per cent of moisture. It would have five or six points more of natural iron in it.

The CHAIRMAN. What does it cost per ton to mine that Utah ore?

Mr. SELLWOOD. Well, you take it in that country where there is a great deal of it, that ore should be mined and crushed and put in shape for 75 or 80 cents a ton. That could not be done if you had to go under ground and hoist it and pump lots of water, but the way it stands there to-day.

The CHAIRMAN. What is the distance from the nearest available coke supply? I do not mean now ore and coal deposits, but I mean the nearest coal that will make merchantable coke?

Mr. SELLWOOD. I don't know of any coking coal there is in that district anywhere in the West.

The CHAIRMAN. Where would you get your coking coal for that ore?

Mr. SELLWOOD. I could not tell you, unless you would get it from the East, and that would be impossible, of course, as the freight would eat you up.

The CHAIRMAN. That is what I am trying to get at. If this ore, located in the Rocky Mountains—that is where it is, is it not?

Mr. SELLWOOD. Yes.

The CHAIRMAN (continuing). Is hundreds of miles—many hundreds of miles from a coke supply. For present purposes it is as absolutely unmerchantable as if it were 30 per cent ore and nearer?

Mr. SELLWOOD. Yes.

Mr. REED. They make coke in Wyoming, do they not?

Mr. SELLWOOD. I don't think so.

Mr. REED. Isn't that where they get the coke for the copper smelters in Butte?

Mr. SELLWOOD. I don't think so.

The CHAIRMAN. Then this ore is not an available ore supply; it is a mere reserve?

Mr. SELLWOOD. A mere reserve; that is exactly what it is.

The CHAIRMAN. It has no present value?

Mr. SELLWOOD. No, sir.

The CHAIRMAN. Is this ore within reach of—even if it had the coal—of any large consuming market at which it could be delivered at a practicable cost of transportation?

Mr. SELLWOOD. Well, it is not a long way. I guess it is three or four hundred miles from Los Angeles.

The CHAIRMAN. Are there any railroad facilities between this ore and market of Los Angeles?

Mr. SELLWOOD. I rather think there is a road built through there, what is known as the Clark Road. It was within 40 miles of a railroad before. I went up to it within 40 miles eight years ago.

The CHAIRMAN. Now, you spoke of the ores of the Colorado Fuel & Iron Co.

Mr. SELLWOOD. In Wyoming.

The CHAIRMAN. Yes. Has the Colorado Fuel & Iron Co. all the available ore in that region?

Mr. SELLWOOD. They have all in what they call the Sunrise district.

The CHAIRMAN. Well, is there any other available ore in that region now opened for independent iron and steel companies?

Mr. SELLWOOD. I don't know of any other ore. There may be other ore there, but I don't know of it. I went there just to see that district.

The CHAIRMAN. Now, take this California ore, where you say they have—how many million tons?

Mr. SELLWOOD. I think I put that at 100,000,000 tons.

Mr. GARDNER. You estimated it at 250,000,000.

Mr. SELLWOOD. Oh, 250,000,000. Well, there is a large amount of ore there. In the same way, I don't know how you are going to handle that at present.

The CHAIRMAN. Why isn't it merchantable and available? Explain that.

Mr. SELLWOOD. Because you do not have any coking coal near it.

The CHAIRMAN. It takes about a ton and a quarter of coal to every two tons of Superior ore, does it not?

Mr. SELLWOOD. My understanding of the furnace practice is that it takes about two tons of coal to make a ton of coke, and that a ton of coke will make a ton of pig iron. Am I right about that?

Mr. REED. Pretty nearly.

The CHAIRMAN. That is what I said.

Mr. GARDNER. Of what percentage ore?

Mr. SELLWOOD. Oh, that would be a 50 per cent natural ore deposit.

The CHAIRMAN. I said the Superior ore. I was figuring on the load of the furnace. A ton and a quarter of coke to two tons of ore. That is about it, is it not, Mr. Reed?

Mr. SELLWOOD. Yes; that is, figuring an ore at 50 per cent natural.

The CHAIRMAN. So that where you have to haul your coke any great distance to your ore——

Mr. SELLWOOD. It shuts it off.

The CHAIRMAN. The manufacture of pig iron from that ore is impossible?

Mr. SELLWOOD. Yes.

The CHAIRMAN. As long as you have the facilities for transportation between the Pittsburgh and Pennsylvania districts and the ores in the Lake Superior region?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Until those ores are exhausted, these other ores can not be utilized?

Mr. SELLWOOD. No; they are just there as reserve ores.

The CHAIRMAN. Just as reserve ores?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Now, without going into these other ores, are there in Texas or in New York or in New Mexico or at any other point you have named any large bodies of ores that can now be converted into pig iron in competition with the ores of Birmingham and the ores of the Lake Superior district?

Mr. SELLWOOD. There is in New York State. The mines on Lake Champlain; they are mining right along.

The CHAIRMAN. And making pig iron out of it?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Are those ores now owned by various mining companies?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Are they pretty well taken up?

Mr. SELLWOOD. Yes.

The CHAIRMAN. There are none of those on the market now?

Mr. SELLWOOD. Not that I know of. The mines I speak of are at Port Henry and they are owned by the Witherbee-Sherman Co., and there are some owned by other interests.

The CHAIRMAN. Do you know of any ores in the United States now on sale and marketed and handled by persons like yourself who are selling ores outside of the Michigan and Superior district that can be made into pig iron on a competitive basis and are not owned or leased by some iron manufacturing concern?

Mr. SELLWOOD. The Witherbee-Sherman mines are not owned by a manufacturing company. Those are in the Lake Champlain district. That is sold in the open market, most of it.

The CHAIRMAN. In the what?

Mr. SELLWOOD. Sold in the open market.

The CHAIRMAN. Leaving out that, do you know of any other?

Mr. SELLWOOD. No; not outside of the Lake Superior district.

The CHAIRMAN. Now, what is the size of that property?

Mr. SELLWOOD. What?

The CHAIRMAN. To what extent—how large is it? What is the extent of that property—its tonnage?

Mr. SELLWOOD. In the Minnesota district?

The CHAIRMAN. No.

Mr. YOUNG. The Witherbee-Sherman.

The CHAIRMAN. The Witherbee-Sherman; yes.

Mr. SELLWOOD. Oh, there is quite a good amount of ore there. I should say there is about 200,000,000 tons there that is available.

The CHAIRMAN. Is it owned by one concern?

Mr. SELLWOOD. Oh, no; that is owned by several parties. It goes way up to Prattville.

The CHAIRMAN. How does it happen that it has never been preempted by any iron concern?

Mr. SELLWOOD. The same family—the Witherbee-Sherman families—have been engaged in mining that for 60 years.

The CHAIRMAN. Are they engaged in the pig-iron business to any extent?

Mr. SELLWOOD. I was there once, and their furnace was not in operation at that time and they were selling all their ore.

Mr. GARDNER. I want to get the answer to your question about the extent of the deposit of the Witherbee-Sherman mine.

The CHAIRMAN. I understood him to say about twenty to thirty million tons.

Mr. YOUNG. He said about 200,000,000 tons in the district up there.

Mr. GARDNER. Did you mean merchantable ore?

Mr. SELLWOOD. Yes.

Mr. GARDNER. This morning you estimated it at a hundred million.

Mr. SELLWOOD. Well, I was off on that.

Mr. GARDNER. That is, I took it down as a hundred million.

Mr. SELLWOOD. No; there is more than that there.

The CHAIRMAN. How much for the Witherbee-Sherman people?

Mr. SELLWOOD. Well, I would say that they had about 20 to 25 per cent of the ore there is in that district.

The CHAIRMAN. Now, how far are they from their coke supply?

Mr. SELLWOOD. Well, they are not a great way from the Pennsylvania coke district. They have smelted some ore there with anthracite coal.

The CHAIRMAN. Did they make this pig iron with anthracite coal?

Mr. SELLWOOD. They did. I don't know that they have done it in 10 or 15 years.

The CHAIRMAN. What is the difference in the cost of producing pig iron using anthracite coal and using coke?

Mr. SELLWOOD. I could not answer that. I know nothing whatever about the manufacturing end of it.

The CHAIRMAN. Isn't it true that they originally used charcoal in manufacturing pig iron?

Mr. SELLWOOD. Yes.

The CHAIRMAN. And then anthracite coal?

Mr. SELLWOOD. In that district?

The CHAIRMAN. No; all over the country. Wasn't anthracite coal used all over the country before bituminous coal was used at all?

Mr. SELLWOOD. I don't know.

The CHAIRMAN. Well, that is my impression. Isn't it true that the high cost of anthracite coal and the lack of its efficiency in making pig iron caused coke to be universally substituted for it?

Mr. SELLWOOD. I could not say.

The CHAIRMAN. Can iron be manufactured in any great quantities and sold in competition with furnaces using cheap coke, where the maker is dependent upon anthracite coal for the manufacture of his pig iron?

Mr. SELLWOOD. I don't know. I presume so. They were right in that—almost in that—anthracite district, and it was a small furnace; and I don't know of it being used anywhere else.

The CHAIRMAN. I see. They might in a small district supply a limited market and make iron at $15 or $16 a ton, might they not?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Do you know anything about their furnace cost?

Mr. SELLWOOD. No; I do not.

The CHAIRMAN. So you do not know whether this ore which is dependent upon anthracite coal for its conversion into iron can be made on a large scale in competition with the ores made from coke or not?

Mr. SELLWOOD. I do not. I know they have abandoned it long ago. They did make some with anthracite coal, but they have not done it for years.

The CHAIRMAN. What do they use now?

Mr. SELLWOOD. I don't know that they run that furnace. I think that ore is mostly sold to the Lackawanna Steel Co.

The CHAIRMAN. Well, do you know to what extent the Lackawanna Steel Co. has that ore under contract, either in the form of a lease or contract for the output of these people, or anything of that sort?

Mr. SELLWOOD. I think they are interested in some way.

The CHAIRMAN. Then do you know whether the owners of this ore, who are in the ore business, are interested in the Lackawanna people to the extent that they are not selling ore in any great quantities generally to the public?

Mr. SELLWOOD. No; I do not.

The CHAIRMAN. You don't know anything about that?

Mr. SELLWOOD. No. I was there about 10 years ago. The Lackawanna Steel Co. had no interest in it at that time.

The CHAIRMAN. Now, Mr. Young has asked you if it would not be possible to get large quantities of ore by buying the plants that now have this ore under lease. Do you think it would be a practicable proposition to buy—attempt to buy out a man doing a profitable business; to take his plant and pay him for it, and his good will and all that sort of thing, in order to get his ores?

Mr. SELLWOOD. I say it could be done, if you wanted to pay the price.

The CHAIRMAN. Do you think it would be good business policy?

Mr. SELLWOOD. How?

The CHAIRMAN. Wouldn't it be a good deal like buying a barrel to get a bung hole?

Mr. Young. How did the United States Steel Corporation get its property?

Mr. Sellwood. By buying it from different people.

Mr. Young. They bought operating plants?

Mr. Sellwood. Yes.

Mr. Young. They found it practicable, didn't they?

Mr. Sellwood. The American Steel & Wire—they bought all of their plants that way.

Mr. Young. They found it practicable?

Mr. Sellwood. Yes.

The Chairman. Did these plants buy each other?

Mr. Sellwood. It seems to me that they were all put in the same "jack pot."

The Chairman. You could not say that the American Steel & Wire bought anybody out?

Mr. Sellwood. No; they bought theirs before it was formed.

The Chairman. These people simply put their property in a "jack pot" and went on doing business.

Mr. Young. That is not the testimony before this committee. Mr. Gates swore before this committee that he and Mr. Elwood bought plant after plant with their own money and then——

The Chairman. Oh, yes; but that was not your question. You asked him if the United States Steel Corporation did not buy them that way.

Mr. Young. I did; and then I asked him if the American Steel & Wire did not do it.

Mr. Gardner. Did that question and your answer mean that anybody who wanted to buy ore lands could get them by going to the company who had them——

Mr. Sellwood. Yes; if they paid enough for them.

Mr. Gardner. Yes; that is, if the Pennsylvania Railroad Co. chose to sell its railroad they could do so. Let me put it this way: Are there any such things as nonoperative steel companies that have dismantled plants and at the same time large reserves in ore, or is it the fact that only operative steel companies have large ore reserves?

Mr. Sellwood. No, sir; that is not quite what I intended to convey. There are several independent operators—miners who mine the ore and sell it in the market.

Mr. Gardner. Yes; that we know.

Mr. Sellwood. And their ore could be bought by some other company or by the United States Steel Corporation or by anybody else. The Chases—they would sell their ore and their furnaces and their rolling mill if anyone wanted to buy them and pay the price for them.

Mr. Reed. They are producing more ore than they used to?

Mr. Sellwood. Yes; they are selling ore right along.

Mr. Gardner. Now, is it or is it not your opinion that a person who wished to set up in a competitive steel manufacturing business could buy sufficient ore reserves——

Mr. Sellwood. He could.

Mr. Gardner (continuing). Outside of the Hill leases, I mean?

Mr. Sellwood. He could.

Mr. Gardner. He could?

Mr. Sellwood. Yes.

Mr. Gardner. Now, what you consider—how many tons would you consider a sufficient ore reserve?

Mr. Sellwood. Well, I could not answer that, because I do not know anything about the manufacturing business. I would say, in the first place, it would depend on how much money you have to spend—how large a plant you want to build. Do you want to build a plant that would manufacture a thousand tons a day or a hundred thousand tons a day or fifty thousand tons a day?

Mr. Gardner. Of course, for a thousand tons a day, while I don't know anything about the business, I don't know whether that would pay or not.

Mr. Sellwood. Well, of course, that is the question, whether it would be 1,000 tons a day or 10,000 tons a day or what.

The Chairman. Mr. Gardner, I would suggest you frame your question along the line—if you start out with a company large enough to be an active competitor with the Cambria or the Pennsylvania Co.——

Mr. Gardner. I tried this morning, Mr. Chairman, but did not get anywhere with it. Now, Mr. Sellwood, if a company is not big enough to compete with the Cambria Co. it had better go out of business, had it not?

Mr. Sellwood. Well, I would say so.

Mr. Gardner. Now, how big has a company got to be before it can compete with the Cambria Co.?

Mr. Sellwood. Well, one of its size, of course, ought to be big enough to compete with it.

Mr. Gardner. What is the capacity of the Cambria?

Mr. Sellwood. I don't know. They own a half interest in the Mahoning mine. That would give them about 50,000,000 tons of the Mesabi ore.

Mr. Gardner. That is their reserve?

Mr. Sellwood. Yes. Well, they are mining it right along.

Mr. Gardner. Have they any other ore reserves besides that 50,000,000 tons?

Mr. Sellwood. I think they own the Republic mine, do they not, Mr. Young, at Republic? They control it, I think.

Mr. Young. Yes; and they own the Penn down on the Menominee Range.

Mr. Gardner. Is it generally felt that the Cambria has sufficient ore reserves for the future?

Mr. Sellwood. Yes.

Mr. Gardner. Or is it a fact that the Cambria is actually maintained in order to prevent the Pennsylvania Railroad from being charged excessive rates for rails?

Mr. Sellwood. I don't know as to that; but they control considerable ore. I would say, offhand, they control about 100,000,000 tons of ore in the Lake Superior district.

Mr. Gardner. Is it your opinion that a hundred million tons of ore is about the lowest amount of merchantable ore reserve that it would be safe with which to go into the competitive steel-manufacturing business?

Mr. Sellwood. I would say yes. I am not a manufacturer, but I would not care to go into it unless I could see a hundred million tons in reserve.

Mr. GARDNER. You would not care to go into it unless you had a hundred million tons in reserve?

Mr. SELLWOOD. No, sir.

Mr. GARDNER. You probably would not care to go into it, then, would you?

Mr. SELLWOOD. No, sir; I would not—not at my age and knowing nothing about the business.

Mr. GARDNER. You would not advise me, a blooming young man, to do it?

Mr. SELLWOOD. No, sir.

Mr. GARDNER. No matter how big an ore reserve there might be——

Mr. SELLWOOD. I would not go into it.

Mr. GARDNER. You think there would be some difficulty in getting into the charmed circle; is that the idea?

Mr. SELLWOOD. No; but I don't know anything about the business, and I am too old to learn. I do know something about mining, and I had rather mine it and sell it.

Mr. GARDNER. Now, suppose it takes a hundred million tons of ore reserve to go into the steel-manufacturing business, where is a company going to find that much ore in a workable place with the railroads attached, and the convenience of fluxing materials, and coking coal, and so on, as a practical question? Where would one go?

Mr. SELLWOOD. I don't know anything about that end of it, but I would say, so far as the iron ore is concerned, that you can get iron ore in the Gogebic Range, and you can pick up iron ore in different places over a territory about 50 miles in length on the Mesabi. You can not get any 50,000,000-ton deposit, however.

Mr. GARDNER. Now, would it be practicable to work all of those separate spots?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Just as cheaply as if they were all in one?

Mr. SELLWOOD. No; I did not say just as cheaply.

The CHAIRMAN. Do you know any place on this continent where a man could get 50,000,000 tons of ore comparable in quality, in quantity, in location, and facility of transportation with the holdings of the Cambria Co. in the Mahoning mine alone?

Mr. SELLWOOD. Not in one mine.

The CHAIRMAN. Or in any number of mines?

Mr. SELLWOOD. Oh, yes.

The CHAIRMAN. And of the quality and that could be mined as cheaply?

Mr. SELLWOOD. Oh, yes; it may be had, in small deposits.

Mr. GARDNER. You meant outside of the Hill ores? You did not mean to say that there were none of the Hill ore lands that meet those conditions?

Mr. SELLWOOD. I think some one asked the question outside of the Hill lands. I think that Longley and Bennett have got a hundred million tons in a radius of 10 miles.

The CHAIRMAN. Well, we are leaving that Hill lease out.

Mr. SELLWOOD. Yes; there are plenty of people up there with anywhere from 2,000,000 to 5,000,000 or 6,000,000 tons.

The CHAIRMAN. Now, to find a man with 5,000,000 tons of ore—is that ore stripped?

Mr. SELLWOOD. Is it stripped?

The CHAIRMAN. Yes.

Mr. SELLWOOD. No; but plenty of it is underground.

The CHAIRMAN. You would have to make a guess, if it was not stripped; you would not know whether it was 3,000,000 or 8,000,000 tons.

Mr. SELLWOOD. Well, you could tell that by drill holes.

The CHAIRMAN. Could you tell definitely?

Mr. SELLWOOD. Yes.

The CHAIRMAN. You would have to sink a great number of drill holes, would you not?

Mr. SELLWOOD. Yes.

The CHAIRMAN. And that would cost something?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Then you would have to take that overburden off.

Mr. SELLWOOD. Not necessarily. If your overburden was very deep, you would have to mine it underground.

The CHAIRMAN. If it was an open-pit proposition, you would have to take it off?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Could you drill and strip and run your railroad in and get your ore, five or six million tons in a bunch, and compete with the Mahoning ore there right at the railroad, already stripped, at anything like the same cost of production?

Mr. SELLWOOD. No, sir; you could not. You can get the ore, but not as cheaply.

The CHAIRMAN. Mr. Sellwood, isn't it true that to determine whether or not it is more profitable for a new concern to go into the business, you would have to know first whether there was that amount of ore available?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Then it would require the knowledge of a practical steel man to settle the other question, whether or not that available ore could be economically mined in competition with other companies?

Mr. SELLWOOD. Yes.

The CHAIRMAN. And that is the question you can not answer?

Mr. SELLWOOD. No, sir.

The CHAIRMAN. Who do you think would be competent to answer that question? Who has had experience both in the manufacture of steel products and in the purchase of ores?

Mr. SELLWOOD. I would say Mr. Gayley.

The CHAIRMAN. Who else? How about Mr. Schwab?

Mr. SELLWOOD. Oh, sure.

The CHAIRMAN. Would you be willing to take his opinion on that?

Mr. SELLWOOD. Oh, yes.

The CHAIRMAN. If Mr. Schwab was of the opinion that there was no ore supply now available for a company of the size of the Cambria to do business economically, would you take his opinion on it?

Mr. SELLWOOD. Yes, sir. There is one thing sure; you can not buy ore now on the Mesabi Range or anywhere in the Lake Superior district for the price that the United States Steel Corporation or the Cambria Iron Co. or anybody else who bought it 20 years ago got it then.

The CHAIRMAN. How is that? I did not catch that.

Mr. SELLWOOD. I say there is one thing sure——

The CHAIRMAN. Oh, I understand; you can not now buy the ore and compete with those people who bought sometime ago?

Mr. SELLWOOD. No, sir; you can not. They have the best of the ore; have got the biggest deposits, and got it for little money.

Mr. BARTLETT. In answer to Mr. Gardner's question, when he asked you if you were going to put up a steel plant the size of the Cambria, where you could get the ore, you answered, in the Gogebic district.

Mr. YOUNG. He said 50 miles on the Mesabi Range, and in the Gogebic district.

Mr. SELLWOOD. Yes; 50 miles on the Mesabi Range and in the Gogebic district.

Mr. BARTLETT. In this report of Leith's he says at the present rate of shipment in 1910, this reserve, speaking about the Gogebic district, would last about 8.6 years. Further extensions are probable.

Mr. SELLWODD. Well, experts differ. Mr. W. J. Olcott, who is now president of the Oliver Iron Mining Co., and a very fine man, and a man of good judgment, and Mr. W. J. Rattle, of Cleveland, who was considered one of the best experts, said, in 1893, that there was not 10,000,000 tons left on the Gogebic Range, and they agreed fully on that. And they have been shipping two or three million tons a year out of there since, and have a good deal more ore on there now than they did at that time; and, as I said this morning, they have been shipping for 55 years out of the Marquette region, and I was there over 40 years ago, and we thought when we got down to a certain depth it had all gone, and we have four times more over in Marquette County to-day than we had 20 years ago in sight.

The CHAIRMAN. You have heard of the fellow who lived from March to March for 50 years, and whenever he lived through March he thought he was going to live another year sure?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Do you think that because they have continually discovered ores for 50 years in the Michigan region that is any evidence that they will never cease to discover ores up there?

Mr. SELLWOOD. No, sir; they are getting deeper. That is not true of the Mesabi Range, because it is flat.

The CHAIRMAN. The Mesabi Range is like this table?

Mr. SELLWOOD. Yes.

The CHAIRMAN. When you get beyond that takonite you know there is no more ore?

Mr. SELLWOOD. That is right.

The CHAIRMAN. But where you are striking vertical veins like a streak of lean and a streak of fat you are liable to strike a vein anywhere?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Where one vein ends it does not indicate where another vein will begin?

Mr. SELLWOOD. No.

The CHAIRMAN. You may be through and you may not?

Mr. SELLWOOD. That is true. I think it safe to say that in the Gogebic Range there is hardly one deposit now that is in operation that was in operation 28 years ago, when I began operating there.

Mr. BARTLETT. You don't know how many tons have been shipped out from there? This man said fifty million and odd tons.

Mr. SELLWOOD. I presume that is right.

Mr. BARTLETT. He said the total reserve there is seventeen million and odd hundred tons.

Mr. SELLWOOD. And I would say when they get that out they will find 17,000,000 tons more. In those vertical veins you do know when they are going to give out.

Mr. YOUNG. Judge Bartlett, if you will permit me a moment, I find that, according to the account kept at the Soo Canal, supposed to be accurate, there have been 65,179,956 tons up to the end of 1910 shipped from the Gogebic region, which passed through the canal.

Mr. REED. Those are figures given in the Iron Trade Review that you have in the record at page 307?

Mr. YOUNG. Yes.

Mr. BARTLETT. I was simply quoting from an official document here.

Mr. YOUNG. I understood, Judge; but I simply wanted to call your attention to a record that was kept at the canal.

Mr. BARTLETT. Of course, I have no interest of my own in it, and I was simply trying to find out something about it.

Mr. YOUNG. I know Mr. Leith very well, and he is a very decent young fellow.

Mr. BARTLETT. If his calculation is right, that the reserve will last 8.6 years, why, it would not be as long as you would want it to last if you were going into the steel business, would it?

Mr. SELLWOOD. No; but they will find a good deal of other ores while they are taking that out.

Mr. BARTLETT. How much greater is the extent of the ore in the Mesabi Range than in the Gogebic?

Mr. SELLWOOD. Oh, they have much more.

Mr. BARTLETT. He says the total reserve in this Gogebic district is 17,298,000 long tons.

Mr. SELLWOOD. You have single deposits—we have single mines on the Mesabi that have a hundred million, and this covers a distance of about 20 or 25 miles.

Mr. BARTLETT. How much available ore for purchase—I do not mean the ore, but the ore lands—is available for purchase in the Mesabi Range?

Mr. SELLWOOD. Oh, there is a hundred million tons easy enough and a good deal more.

Mr. BARTLETT. Then, you would want a hundred million tons for one substantial plant that you were going to begin business with?

Mr. SELLWOOD. I surely would.

The CHAIRMAN. Now, Mr. Sellwood, you spoke of the ore holdings of the Steel Corporation on the Mesabi Range as 500,000,000 tons in round numbers.

Mr. SELLWOOD. Well, I put it at five or six.

The CHAIRMAN. Six hundred millions?

Mr. SELLWOOD. Yes.

The CHAIRMAN. And you said that that is not an excessive holding?

Mr. SELLWOOD. No; not for their plant.

The CHAIRMAN. If it were twice that, or three times that, it would not be an excessive holding for that plant, would it?

Mr. SELLWOOD. No; if I were handling that plant and had my say about it and had the money, I certainly would have all I could get.

The CHAIRMAN. If they owned all the ore in the Lake Superior district now held by other companies, including the Hill leases, it would not be an excessive holding for their plant, would it?

Mr. SELLWOOD. No, sir.

The CHAIRMAN. Now, then, what do you mean by "an excessive holding?" What would you consider an excessive holding?

Mr. SELLWOOD. I would think if they had holdings to last two or three hundred years, that would be rather excessive, but if they only had enough for 25 years, I would not think that was enough.

The CHAIRMAN. And the fact that they had all the available ore would not, to your mind, make their holdings excessive?

Mr. SELLWOOD. I did not quite understand.

The CHAIRMAN. I say, if they should get 85 or 90 per cent of all the available ores, that would not make their holdings excessive, according to your view?

Mr. SELLWOOD. Oh, no; they have a big plant and they want something to keep it going for a long time. I think a big plant of that kind should have all the ore they can get hold of at a reasonable price.

The CHAIRMAN. And if they happened to get all that was available, that would simply be the other fellow's misfortune that wanted to go into the steel business?

Mr. SELLWOOD. That is the way I would figure it.

The CHAIRMAN. Now, you have made a study all your life of ores?

Mr. SELLWOOD. Yes, sir; just made it my business.

The CHAIRMAN. Are there in this country any ores that are comparable with the Superior ores, when you consider the facility with which they are mined, the cheapness, and the rapidity with which the ore can be delivered at the furnaces, and its high degree of metallic content, its absence of phosphorus, and all that sort of thing—do you know of any ores on this continent that are comparable with it?

Mr. SELLWOOD. I did not understand the question, Mr. Stanley.

The CHAIRMAN. I do not know much about ores myself, but I was trying to include a few of the things that make an available and desirable ore. Taking into consideration the facility with which it is mined—it is an open-pit proposition in a great many cases, is it not?

Mr. SELLWOOD. Some of them.

The CHAIRMAN. Are there any other ores in this country that can be mined in that way as cheaply as the Superior ores?

Mr. SELLWOOD. No; none can be mined as cheaply, that I know of, as the Mesabi ores.

The CHAIRMAN. Do you know of any ores in this country that can be delivered from the mines to the blast furnace as readily, where there is the same density of traffic, the same capacity for the rapid delivery of the ore, that you have on the Mesabi Range?

Mr. SELLWOOD. No.

The CHAIRMAN. Do you know of any large body of ore on this continent that is as free from phosphorus as the ore in that region?

Mr. SELLWOOD. No, sir.

The CHAIRMAN. Do you know of any body of ore on this continent—large body of ore—hundreds of millions of tons of as high degree of metallic content as this ore?

Mr. SELLWOOD. None except that in Utah.

The CHAIRMAN. Which is not available?

Mr. SELLWOOD. No.

The CHAIRMAN. How does this ore compare in these respects with the ores of the world?

Mr. SELLWOOD. We think we have the best and the most of it of anybody in the world.

The CHAIRMAN. How does it compare with the ores of Germany, such as are utilized in the furnaces over there?

Mr. SELLWOOD. I could not tell, because I do not know anything about them.

The CHAIRMAN. Do you know——

Mr. SELLWOOD. I know that we are producing more than anybody else.

The CHAIRMAN. Do you know whether we can assemble our ores more cheaply than they do there? Do you know how far they have to be hauled?

Mr. SELLWOOD. No, sir; I do not.

The CHAIRMAN. Do you know anything about the ores in England? What the relative advantage is to the English iron makers?

Mr. SELLWOOD. No; while I was born and raised in England, I know nothing about their iron mines.

The CHAIRMAN. Now, Mr. Sellwood, you spoke of the tax commission of Minnesota making a very careful and accurate estimate of the ore holdings of all these companies?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. They have done that for the purpose of taxation, I presume.

Mr. SELLWOOD. Yes.

The CHAIRMAN. And it was to their interest to find every ton of ore?

Mr. SELLWOOD. Yes.

The CHAIRMAN. And to know exactly who held it and under what terms?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Would you be willing to take the estimate of the tax commission of Minnesota, both as to the quantity of ore now in that region and as to the ownership of it, as accurate?

Mr. SELLWOOD. I would. I think they are nearer right than any other one person. They have gone into it very carefully in the last three or four years.

The CHAIRMAN. The secretary of the tax commission of Minnesota would be apt to know about the relative proportion held by these various companies, more than anybody else, would he not?

Mr. SELLWOOD. Yes; he should.

The CHAIRMAN. Have you ever made any careful estimate of the tonnages in that district for the purpose of ascertaining what proportion the Lackawanna Co. had and what proportion Jones &

Laughlin had and what proportion the Cambria Co. had and what proportion the United States Steel Corporation had?

Mr. SELLWOOD. No; I never made any careful examination.

The CHAIRMAN. You spoke just from memory and general knowledge?

Mr. SELLWOOD. Yes.

The CHAIRMAN. You are only making a rough estimate?

Mr. SELLWOOD. Yes.

The CHAIRMAN. And you do not mean to speak with absolute accuracy?

Mr. SELLWOOD. No, sir; except the tonnage I gave you of the United States Steel Corporation are figures copied from the tax commission.

The CHAIRMAN. Is it copied from this book here, Tonnage and Assessed Valuation of——

Mr. SELLWOOD. I don't know.

The CHAIRMAN. This is made out in the county auditor's office of St. Louis County. You have seen this?

Mr. SELLWOOD. No; that is not the one that I referred to. I got mine from the State tax commission.

The CHAIRMAN. I find in some cases, take the Lone Jack mine—this is for the year 1908——

Mr. YOUNG. Well, that is the year before, you see.

The CHAIRMAN. Now, the Lone Jack mine——

Mr. YOUNG. This other one in 1909.

The CHAIRMAN. Lone Jack, Oliver Iron Mining Co. They give for the Lone Jack mine 2,319,193 tons, and you gave 2,319,195 tons, so your figures in that respect are approximately the same.

Mr. SELLWOOD. Yes.

The CHAIRMAN. What proportion of the ores of the Steel Corporation in the Superior district are in St. Louis County?

Mr. SELLWOOD. What proportion?

The CHAIRMAN. Yes.

Mr. SELLWOOD. Well, I would say—of the Steel Corporation's holdings?

The CHAIRMAN. Yes.

Mr. SELLWOOD. I would say 90 per cent.

The CHAIRMAN. Now take the Spruce mine; that is operated by the Oliver Iron Mining Co.

Mr. SELLWOOD. Yes.

The CHAIRMAN. That mine you give its total, I believe, at fifteen million and some odd tons?

Mr. SELLWOOD. I don't remember what the figures are.

The CHAIRMAN. That is an open pit and shaft proposition, is it not?

Mr. SELLWOOD. Yes.

The CHAIRMAN. What is the depth of the stripping in that mine?

Mr. SELLWOOD. Oh, I could not say.

The CHAIRMAN. Approximately 50 feet?

Mr. SELLWOOD. How much?

The CHAIRMAN. Fifty feet.

Mr. SELLWOOD. I should say it would be that much.

The CHAIRMAN. That mine is reached by what railroad?

Mr. **Sellwood.** That is reached, I think, by the two railroads, both the Missabe & Northern and the Duluth & Iron Range. I may not be right about that.

The **Chairman.** Do you know whether it was stripped at the time the Hill ore lease was taken or not?

Mr. **Sellwood.** Very little. It was stripped partly.

The **Chairman.** It is stripped now, is it not? How much of it is stripped now? How many acres?

Mr. **Sellwood.** I could not tell you. I just took those figures right off the tax commission's report.

The **Chairman.** Well, you made no figures for the other companies?

Mr. **Sellwood.** No; I did not.

The **Chairman.** You just took it from the tax commission's report?

Mr. **Sellwood.** Yes.

The **Chairman.** Now, has that mine been operated in the last year to any extent?

Mr. **Sellwood.** Why, as far as I know, it has been. I do not think it has been crowded, because the steel company has so much ore to remove from the Hill leases.

The **Chairman.** They were getting out their minimums from the Hill leases?

Mr. **Sellwood.** Yes.

The **Chairman.** And they have not been doing much operating on that mine?

Mr. **Sellwood.** No, sir; I don't think they have.

The **Chairman.** Now, take the Sauntry. You give that at 31,000,000 tons, I believe.

Mr. **Sellwood.** Yes.

The **Chairman.** I am giving it in round figures—31,700,000 tons.

Mr. **Young.** What was the other report?

The **Chairman.** This report gives it at 20,000,000 tons. That is an open pit and shaft proposition?

Mr. **Sellwood.** The Sauntry is all open pit. The Alpena is a shaft mine. They paid $700,000 for the Sauntry.

The **Chairman.** And how many tons of ore? You estimate 30,000,000 tons?

Mr. **Sellwood.** Yes.

The **Chairman.** Now, it is stripped, is it not?

Mr. **Sellwood.** It is a stripping property.

The **Chairman.** How much of it is stripped?

Mr. **Sellwood.** I don't know. I should say 25 or 30 per cent is stripped now.

The **Chairman.** How many acres would that be?

Mr. **Sellwood.** Anywhere from 40 to 60 acres.

The **Chairman.** Has that mine been operated lately by the Steel Corporation?

Mr. **Sellwood.** I could not say.

The **Chairman.** What roads reach it?

Mr. **Sellwood.** The Duluth, Missabe & Northern reach it. I presume they have not done much work, because they have owned it in fee and they have been devoting their time to taking out the Hill ores.

The CHAIRMAN. Take the Sharon mine. You have an estimate in the Sharon of 14,000,000 tons, I believe. That is a stripping proposition, is it not?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. How many acres are there stripped?

Mr. SELLWOOD. I don't know, but I rather think—I would say, offhand—about 40 acres of it are stripped.

The CHAIRMAN. That is about 50 feet stripped, is it not?

Mr. SELLWOOD. Yes.

Mr. YOUNG. Fifty feet in depth.

Mr. REED. Fifty feet of the overburden.

The CHAIRMAN. Has that mine been operated since the Hill lease was taken?

Mr. SELLWOOD. I could not answer that. I have not been on the property for years.

The CHAIRMAN. The Monroe-Tener mine, 32,000,000 tons.

Mr. SELLWOOD. That is a big deposit, yes; I would say they have that much.

The CHAIRMAN. How many acres of that is stripped?

Mr. SELLWOOD. Oh, I think they have 50 or 60 acres of it stripped.

The CHAIRMAN. The depth of the stripping is about 80 feet, is it not?

Mr. SELLWOOD. I did not think it was that much. I thought, probably, about 60; but I don't know.

The CHAIRMAN. Now, what roads reach that mine?

Mr. SELLWOOD. I think the Missabe & Northern. I know it does.

The CHAIRMAN. Is it not true, Mr. Sellwood, that vast property has not been operated in the last year or so to any extent?

Mr. SELLWOOD. I do not hink so. It is a very low-grade ore, in the first place.

The CHAIRMAN. You do not think it has been mined?

Mr. SELLWOOD. It has been mined some, but not very extensively.

The CHAIRMAN. Now, take the Morris mine; that is 26,000,000 tons, here.

Mr. SELLWOOD. I think so.

The CHAIRMAN. What is the depth of the stripping there?

Mr. SELLWOOD. I should say about 40 to 50 feet.

The CHAIRMAN. How many acres are stripped?

Mr. SELLWOOD. I would say 40 to 60 or 80 acres. I could not give it offhand.

The CHAIRMAN. What road reaches it?

Mr. SELLWOOD. It is reached by the Missabe & Northern—the Duluth, Missabe & Northern.

The CHAIRMAN. Have there been any extensive operations in that mine since the Hill ore lease was made?

Mr. SELLWOOD. Only in removing the stripping and taking some ore out.

The CHAIRMAN. The Hull-Rust mine; you give that at—the two Hull mines are put at about 50,000,000 tons.

Mr. SELLWOOD. The two properties?

The CHAIRMAN. Yes; the two properties.

Mr. SELLWOOD. Isn't it fifty and seventy?

The CHAIRMAN. The Hull is thirty-seven here, and thirteen. That struck me as very low for this property. You have the Rust mine at a hundred million.

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. Now, that would be 150,000,000 for the Hull-Rust, as I have it here.

Mr. SELLWOOD. Yes.

The CHAIRMAN. How much is stripped there?

Mr. SELLWOOD. Well——

The CHAIRMAN. One hundred and fifty acres?

Mr. SELLWOOD. I should think there were 150 or 160 acres that is pretty well stripped.

The CHAIRMAN. What is the depth of the stripping?

Mr. SELLWOOD. I would say, as a guess, 50 feet.

The CHAIRMAN. Now, in the last year has the Steel Corporation removed a large amount of ore from that property?

Mr. SELLWOOD. No; not a large amount. They moved a large amount two years ago.

The CHAIRMAN. The reports show a larger amount for 1910.

Mr. SELLWOOD. Yes.

The CHAIRMAN. I was up there last year, and I was impressed with the lack of activity in that mine.

Mr. SELLWOOD. Yes.

Mr. YOUNG. Is that the property where there has been an injunction lately?

Mr. SELLWOOD. Yes.

Mr. YOUNG. Against working it?

Mr. SELLWOOD. Yes.

The CHAIRMAN. No; not against working it. The injunction would not stop them now. That was to keep them from getting in under the town of Hibbing; but they have plenty of ore outside of Hibbing.

Mr. SELLWOOD. Yes.

The CHAIRMAN. Now, you have the Burt-Pool mine here, 7,900,000 tons. How many acres have you got stripped there?

Mr. SELLWOOD. Well, that is pretty nearly all stripped.

The CHAIRMAN. That would be about 80 acres?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Stripped to a depth of how many feet?

Mr. SELLWOOD. It is down to the ore. That surface might have been 60 feet.

The CHAIRMAN. Has there been any great amount of ore removed from that mine since the Hill ore lease?

Mr. SELLWOOD. They did not remove a large amount last year, but I think they removed a good deal of ore out of there in 1910.

The CHAIRMAN. The Fayal mine, have you got that here?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Yes; at 14,000,000 tons. How much have you stripped there?

Mr. SELLWOOD. Well, they have a large amount of that stripped. I don't know that all the property will be stripped.

The CHAIRMAN. They have 40 acres stripped there?

Mr. Sellwood. Yes.

The Chairman. To a depth of 60 feet?

Mr. Sellwood. Yes; I think it would average about that.

The Chairman. And there are shaft connections, too?

Mr. Sellwood. Yes.

The Chairman. Has that mine been operated to any extent since the Hill ore lease was made?

Mr. Sellwood. Yes.

The Chairman. Now, the Lone Jack; that is given at 2,319,000. How much have you stripped there?

Mr. Sellwood. That is about all stripped off.

The Chairman. About 40 acres?

Mr. Sellwood. Yes.

The Chairman. To what depth?

Mr. Sellwood. That stripping, I would say, would average 25 feet.

The Chairman. Has that mine been worked lately?

Mr. Sellwood. No, sir.

The Chairman. Why?

Mr. Sellwood. Because they had another property that they had to go through the Lone Jack to get into, where they had a short-time lease, and they took a good deal of ore out of there.

The Chairman. The Ohio mine; that is given at 3,000,000 tons, I believe.

Mr. Sellwood. Yes.

The Chairman. How much is stripped there?

Mr. Sellwood. Very little.

The Chairman. Very little?

Mr. Sellwood. Yes.

The Chairman. Forty acres?

Mr. Sellwood. Oh, no.

The Chairman. What is the depth of the stripping?

Mr. Sellwood. Well, I would say the stripping would average 30 feet.

The Chairman. Has that mine been worked in the last year or two?

Mr. Sellwood. No, sir; for the same reason. They are adjoining the Lone Jack almost, and they have a short lease on the property adjoining them. They have been working that through a shaft sunk in the Ohio.

The Chairman. Take the Adams mine. You have that at 23,000,000 tons. How much is stripped there?

Mr. Sellwood. Well, I think most all of it is stripped. There are 40 acres stripped, anyway.

The Chairman. To what depth?

Mr. Sellwood. Well, it is stripped anywhere from 25 to 35 feet. A good deal of these figures are a guess.

The Chairman. Yes. Has that mine been operated to any extent in the last year or two?

Mr. Sellwood. Yes.

The Chairman. It has not done a great deal in the last several years compared to what was done before the Hill ore lease was made?

Mr. Sellwood. No; very little. Owing to the general depression, our shipments in 1910 were 43,000,000 tons and in 1911 we were down to about 30,000,000. Take the Lake Superior country, and all of those mines have had a proportionate reduction.

The Chairman. Take the Hartley mine. How many acres are stripped there?

Mr. Sellwood. I couldn't tell you. I don't know anything about that.

The Chairman. Isn't it true that that mine has not been operating since the Hill leases were made?

Mr. Sellwood. No; it has been operating some.

The Chairman. Very little. Isn't that true?

Mr. Sellwood. I couldn't say. The shipments were 25 per cent less last year than the year before over the whole district.

The Chairman. All of these mines that I have mentioned are reached either by the Duluth, Missabe & Northern or the Duluth & Iron Range Railroad, are they not?

Mr. Sellwood. Yes.

The Chairman. And some of them by both?

Mr. Sellwood. Yes; some by both.

The Chairman. All of these mines—ore taken from these mines could be hauled by the Steel Corporation over its own road?

Mr. Sellwood. Yes, sir.

The Chairman. The cost to the Steel Corporation was the royalty, plus the freight, plus the cost of mining?

Mr. Sellwood. Yes.

The Chairman. Most of these royalties—very few of them exceeded 25 cents a ton, did they?

Mr. Sellwood. I don't know what the royalties are. I know some of them are 30 and some 35, but I don't know what they would average.

The Chairman. Well, take the Hull-Rust.

Mr. Sellwood. I am not positive, but I think that is 35 cents.

The Chairman. Weren't those mines leased at 12½ cents?

Mr. Sellwood. What?

The Chairman. Isn't that a very old lease, at 12½ cents?

Mr. Sellwood. No.

The Chairman. It is a sliding scale.

Mr. Sellwood. I think that has been extended some time ago, with an increased royalty.

The Chairman. Well, what would the royalties for these mines I have mentioned average?

Mr. Sellwood. I would say they would average 35 cents.

The Chairman. Thirty-five cents?

Mr. Sellwood. Yes.

The Chairman. Then, after they were stripped, you would not put over 15 cents for the cost of getting out the ore, would you?

Mr. Sellwood. Yes, sir; I would. A great deal of ore from all of those mines, or most of them is mined from underground. It is not all mined by steam shovels.

The Chairman. Well, let us take the steam shovels. All these mines I have read the names of are open pit propositions. Some of them have underground openings in addition. I am speaking now of open-pit propositions. With your open-pit mines, 15 cents would cover it on the average?

Mr. SELLWOOD. From 15 to 20 cents, but that does not include the stripping by any means.

The CHAIRMAN. I know. They are already stripped.

Mr. SELLWOOD. Yes.

The CHAIRMAN. What did you say was the average of the royalty?

Mr. SELLWOOD. Thirty-five cents.

The CHAIRMAN. Would not that be the maximum royalty, Mr. Sellwood?

Mr. SELLWOOD. Well, I don't know. Some of those leases were made 20 years ago, and they have been changed with an increased royalty, and I do not know just exactly how much it is.

The CHAIRMAN. Well, there are very few leases where you pay over 35 cents royalty?

Mr. SELLWOOD. Well, I don't. I think the Fayal and Adams have been extended considerably. I know part of the Fayal—I leased that for the Minnesota Iron Co., the original lease, at 35 cents.

The CHAIRMAN. But 35 cents is near the maximum, is it not?

Mr. SELLWOOD. Yes; but they may all have been readjusted. You see, most of those leases have been in force now for 20 years, and some of them have been extended. I don't know. It is just a guess on my part.

The CHAIRMAN. What page is that where you have a list of your leases?

Mr. REED. In the annual report for 1911.

The CHAIRMAN. There is one of these hearings here; 1771, I think it is.

Mr. REED. On page 50 of this annual report for 1911 is a list of leases.

Mr. SELLWOOD. Of course, if you have it as a matter of record, that is the best evidence. I don't know.

The CHAIRMAN. They do not give the terms of the leases. That just gives a list of leases.

Mr. REED. Yes; that is all.

The CHAIRMAN. But you have a statement here giving the terms of the leases, the time—1771, wherever that is.

Mr. REED. 1771 is the Gary dinner.

The CHAIRMAN. Well, now, take the Spruce Mine. That expires in 1951, that lease. The Fayal, that is a fee proposition, is it not?

Mr. SELLWOOD. Part of the Fayal is fee and part lease.

The CHAIRMAN. The Burt is a lease, and that expires in 1949.

Mr. SELLWOOD. Well, that is the second lease. What is the royalty on that, Mr. Stanley?

Mr. STANLEY. The Burt?

Mr. SELLWOOD. Yes.

The CHAIRMAN. It does not give the royalty.

Mr. SELLWOOD. Well, most of those leases have been rearranged.

The CHAIRMAN. The Hull-Rust, 1950?

Mr. SELLWOOD. They have been renewed from the original leases.

The CHAIRMAN. Now, would you say that 35 cents would be the average?

Mr. SELLWOOD. Of those mines?

The CHAIRMAN. Yes; that I read to you.

Mr. SELLWOOD. I would say so, Mr. Stanley; but I don't know, because I don't know what royalties they are paying on those leases.

The CHAIRMAN. Well, putting it at 35 cents, and say 20 cents to get it out, would be 50 cents. Then, what would it cost them to haul it to the docks at Superior?

Mr. SELLWOOD. What does it cost?

The CHAIRMAN. Yes.

Mr. SELLWOOD. I don't know.

The CHAIRMAN. Well, would it cost them 40 cents?

Mr. SELLWOOD. Well, I say they can possibly haul it there for 40 cents. Of course, there is a switching charge out of the mine and a switching charge at the dock, which all have to be included.

The CHAIRMAN. That would be 95 cents. Now, I will just take the Hill ore leases. They pay 80 and 65—they pay $1.65 for that ore delivered at the Lakes, the first installment, and then 3 or 4 cents additional?

Mr. SELLWOOD. Yes.

The CHAIRMAN. How much ore would you say was in these mines already stripped that I have mentioned, and in this list, available at the time they made that contract, to be brought down there for 95 cents a ton?

Mr. SELLWOOD. I think virtually all of them in that list were available at that time.

The CHAIRMAN. Now, if they had 500,000,000 tons of ore that they could put on the docks at Superior for 95 cents a ton, how do you account for the fact that they deliberately contracted for five or six hundred million tons more, or whatever it was?

Mr. YOUNG. Two hundred and fifty million tons more, Mr. Sellwood testified to.

The CHAIRMAN. I am utterly indifferent to the amount—at double that amount practically.

Mr. SELLWOOD. I don't know.

The CHAIRMAN. As a practical ore man do you regard that as good business?

Mr. SELLWOOD. I would say that I would have taken some of those leases at that price. I offered them a dollar a ton for one lease. I was operating on two sides of it.

Mr. GARDNER. What property did you offer them $1 a ton for?

Mr. SELLWOOD. The Dale property, directly north of the Latonia, and east of the Cypress.

Mr. GARDNER. To be used in connection with the property you already had?

Mr. SELLWOOD. Yes; that was a good grade of ore, and no water to pump.

Mr. GARDNER. $1 for the fee a ton?

Mr. SELLWOOD. No; $1 a ton royalty.

Mr. GARDNER. $1 a ton royalty?

Mr. SELLWOOD. Yes.

Mr. GARDNER. On lease?

Mr. SELLWOOD. Yes.

Mr. GARDNER. How long would the lease have to run?

Mr. SELLWOOD. Well, I would have wanted that lease to run during the life of that property, and I could have taken out all of it in five or six or seven years. I could have gotten it all out, and the steel company will have gotten it all out in that time.

Mr. GARDNER. How long would it have taken to amortize—if that is the proper term to use for arriving at the present worth of a royalty. How long would it have taken to get it all out?

Mr. SELLWOOD. Well, I would have gotten it all out as quickly as I could.

Mr. GARDNER. How much would you have been willing to pay cash for the fee in that mine?

Mr. SELLWOOD. Well, in fact, I did not have the cash to pay, but I had rather pay $1 a ton royalty, as I took it out, than 50 cents a ton cash.

Mr. GARDNER. Even though you had to take it all out in six or seven years?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Wouldn't it have been cheaper for you to pay cash for it at 50 cents?

Mr. SELLWOOD. Yes; if I had it; but I would not have been at any risk in taking it out on a royalty basis. Sometimes you find large bodies of rock, you know.

Mr. GARDNER. Yes; and sometimes, on the other hand, you find more ore.

Mr. SELLWOOD. Yes.

Mr. GARDNER. If it was all going to be dug out in a certain number of years, why would it not have been cheaper to pay 50 cents for the fee than $1 a ton for the royalty?

Mr. SELLWOOD. I did not say it would be cheaper; but I said I did not have the money, but, if I had, I would not have done it.

Mr. GARDNER. That is what I wanted to get at—why you would not?

Mr. SELLWOOD. Because I would have a sure thing on the royalty basis, but if I had paid cash and run into a bunch of rock I would have been that much out.

Mr. GARDNER. But if you had run into a good bunch of ore, and no rock——

Mr. SELLWOOD. Yes; but I do not want to gamble in that way.

Mr. GARDNER. Has not experience shown you that you get more in buying those mines rather than leasing them?

Mr. SELLWOOD. Not always.

Mr. GARDNER. I had rather supposed that you generally found more than you thought you were getting.

Mr. SELLWOOD. You do at times, and at times the reverse.

Mr. DANFORTH. When was that offer?

Mr. SELLWOOD. I made them that offer in 1906. I was working the Latonia Mine and the Cypress. One was directly south and the other was west. It did not have a drop of water to pump.

Mr. GARDNER. Was there any increase clause in that lease?

Mr. SELLWOOD. No; I offered them $1 a ton straight.

Mr. GARDNER. And to dig it out when you had a mind to?

Mr. SELLWOOD. Yes.

Mr. REED. Did that include transportation?

Mr. SELLWOOD. Oh, no; nothing to do with transportation. It was $1 a ton for the ore we removed.

The CHAIRMAN. What was the metallic content of that ore?

Mr. SELLWOOD. What?

The CHAIRMAN. How high was it in iron?

Mr. Sellwood. That ore would average about 60 per cent and only about 8 per cent of moisture and 45 to 50 in phosphorus.

The Chairman. Were there 4,000,000 tons of ore like it in all the rest of Hill's holdings?

Mr. Sellwood. Well, I don't know.

The Chairman. Take all of Hill's holdings and how do they compare in richness, iron content, and in their low degree of phosphorus with the holdings of the United States Steel Corporation at the time the lease was made?

Mr. Sellwood. They are not near as good.

The Chairman. Under development, how do they compare?

Mr. Sellwood. Not nearly as good.

The Chairman. Some of these ores have to be concentrated?

Mr. Sellwood. Yes.

The Chairman. That is, you have to get out as much sand as you do ore?

Mr. Sellwood. Pretty near.

The Chairman. How much concentrated ore did the Steel Corporation have at the time it made the leases? What percentage of it was concentrated ore?

Mr. Sellwood. They had very little of it.

The Chairman. How much of Hill's lease are concentrated ore?

Mr. Sellwood. I don't know; but I would say, on a guess, of Hill's own ore—not the Longley & Bennett—25 to 30 per cent. That is all Hill's own ore.

Mr. Reed. Well, how about the Longley & Bennett?

Mr. Sellwood. Most of that is a good merchantable ore.

The Chairman. Now, you say when you go down with your drill you are liable to strike ore and, then, the next time you go down with the drill you are liable to strike a rock?

Mr. Sellwood. Yes.

The Chairman. And sometimes you think you have struck a flat body of ore, and you have struck a mere crooked seam?

Mr. Sellwood. Yes.

The Chairman. And you do your stripping and when you get down there you find you have just a handful of ore? Has it not occurred in the Hill leases since the United States Steel Corporation got them, that they have gone down and struck a vein and when they stripped it found a narrow streak?

Mr. Sellwood. I don't know how that is, but it is so at some places. I have had drill holes go down 100 feet and in 10 feet away from it was rock.

The Chairman. And when you stripped down you had struck a bad proposition?

Mr. Sellwood. Yes. That would be true in one drill hole.

The Chairman. Isn't it true that Mr. Hill, up to the time this lease was made, always drilled on the other fellow's property? He drilled around his property and not on it; isn't that true?

Mr. Sellwood. I could not say; I don't know.

The Chairman. Was that property explored to any degree so when you went to stripping you knew what you were going to get at the time this lease was made?

Mr. Sellwood. I could not say. I knew a good deal about this property I was speaking of, because I had worked on two sides of it.

The CHAIRMAN. Do you know to what extent the Hill leases were explored?

Mr. SELLWOOD. I know they were not thoroughly explored, but to what extent, I do not know.

The CHAIRMAN. They had this 25-cent lease, I believe, the Hill I mean; I believe that was the amount of one of them, and there were two or three mines being worked at the time this lease was made on the Hill ore property.

Mr. SELLWOOD. The Leonard.

The CHAIRMAN. Yes; the Leonard. How much was stripped on the whole Hill leased property at the time this lease was made? Were there 40 acres?

Mr. SELLWOOD. Yes; but most of it was done at the Leonard mine.

The CHAIRMAN. Was there as much as 60 acres on the whole property stripped?

Mr. SELLWOOD. I know very little about the west end, but I do not remember except at the Leonard mine.

The CHAIRMAN. So when the Steel Corporation made these leases they had to go and get the overburden off at their own expense?

Mr. SELLWOOD. Oh, yes.

The CHAIRMAN. It had to do its drilling at its own expense?

Mr. SELLWOOD. I don't know, but the United States Steel Corporation or nobody else would have taken it at the prices if there had been no drilling done.

The CHAIRMAN. Do you know who paid for the concentrating?

Mr. SELLWOOD. No, sir. Mr. Cole can tell you all about it. He had charge of it.

The CHAIRMAN. Can you give me, as a practical ore man, any reason on earth why the Steel Corporation made a contract for ore that is now costing them $1 a ton which they had to strip and had to concentrate, which was in every way, as you say, inferior to the ores they then had, with the high minimums that were provided in that ore lease—can you give me any good business reason why it was done?

Mr. REED. They do not pay $1 a ton for ore that has to be concentrated.

The CHAIRMAN. You pay for all ore, as I understand it, $1 a ton now. You concentrate it at your own expense, and when your ore gets down there it is treated just like any other ore.

Mr. REED. You pay royalty on the concentration, but not on the ore.

The CHAIRMAN. I mean they concentrate the ore and on the product they pay this royalty, and you wash all that sand out at your own expense.

Mr. REED. Yes.

Mr. YOUNG. Well, the royalty runs down as the iron content runs down.

The CHAIRMAN. Yes.

Mr. GARDNER. The cost of concentration is on the lessee?

Mr. REED. Yes.

Mr. GARDNER. You said that these Utah mines you regarded entirely as a reserve?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. And that you explored them on behalf of Mr. Gates, Mr Harriman, and some one else whose name I have forgotten?

Mr. YOUNG. He examined them, he said; not explored.

Mr. GARDNER. Examined them?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Mr. Gates, Mr. Harriman, and who was the third?

Mr. SELLWOOD. And Mr. Hill.

Mr. GARDNER. Mr. Hill?

Mr. SELLWOOD. Yes.

Mr. GARDNER. How many years ago was that?

Mr. SELLWOOD. I think nine years ago.

Mr. GARDNER. And did they look on them entirely as a reserve?

Mr. SELLWOOD. For the time being; yes.

Mr. GARDNER. How long did they think they would have to hold them before they became commercially available?

Mr. SELLWOOD. I don't know, Mr. Gardner.

Mr. GARDNER. How long did you think, after you had examined those mines, that they would be obliged to hold them before they became commercially available?

Mr. SELLWOOD. I did not think they would have any use for them for the next 25 years.

Mr. GARDNER. For over 25 years?

Mr. SELLWOOD. Yes.

Mr. GARDNER. And at the end of those 25 years, how would they become available?

Mr. SELLWOOD. Well, I thought that they would get short of ore in the eastern country; that is, they would not have as much available ore, and they would be looking for other ores.

Mr. GARDNER. In other words, perhaps—I do not mean to put ideas in your head, but what I gathered is this, that you said "here is some highly metallic ore"——

Mr. SELLWOOD. Yes.

Mr. GARDNER. And when in the East they are reduced to the pass of using their low-metallic ore, then it will pay to ship this ore from Utah, in spite of the high freight rate?

Mr. SELLWOOD. It would pay to ship that ore from Utah or ship the coal to Utah.

Mr. GARDNER. Either to ship the ore from Utah or to ship the coal to Utah?

Mr. SELLWOOD. Yes. I think their idea was to take it just below Los Angeles, down to the coast, and perhaps manufacture some there for the western district.

Mr. GARDNER. As a western market for their finished product?

Mr. SELLWOOD. Yes.

Mr. GARDNER. Now, have you ever attempted to make any figures to show whether or not there has been a steady decrease in the metallic content of the ores which are used in this country? Could you estimate that and tell us the percentage of decrease per annum, for instance?

Mr. SELLWOOD. I would say about 1 per cent for the last four or five years.

Mr. GARDNER. Well, but over a period of 10, 15, or 20 years?

Mr. SELLWOOD. No; I could not tell you.

Mr. Gardner. If I should say that somebody had told me it was one-third of 1 per cent annually for the last 20 years, would that seem an understatement?

That is, that the metallic content of ore for the last 20 years has fallen off about one-third of 1 per cent annually?

Mr. Sellwood. I would not question that.

Mr. Young. About seven points in 20 years.

The Chairman. I am under the impression that prior to the discovery of the Missabe ores, with the exception of the ores in the old range up in Michigan, that they utilized a lower grade ore than they do now. That is, ores in Virginia and New York.

Mr. Young. Oh, yes; a great many years ago.

Mr. Gardner. The Missabe mines they started to open about 1893?

The Chairman. Yes.

Mr. Gardner. I mean in saying 20 years, to cover what you may call the Missabe period. Somebody has told me it has run out about one-third of 1 per cent a year.

Mr. Sellwood. That would make how much?

Mr. Gardner. It would be 7 per cent since the Missabe.

Mr. Sellwood. Well, pretty near it.

Mr. Gardner. In your opinion, is that same process going to continue in the future?

Mr. Sellwood. I think so.

Mr. Gardner. At about the same rate?

Mr. Sellwood. Well, I would not say it would continue at that rate very long.

Mr. Gardner. Well, perhaps the rate would accelerate.

Mr. Sellwood. Perhaps so.

Mr. Gardner. In your opinion, would it be more likely to accelerate—the rate of diminution—rather than to decrease?

Mr. Sellwood. No; I think it will continue to decrease, but I don't think it will to the extent that it does.

Mr. Gardner. You don't think it will decrease as fast as it has?

Mr. Sellwood. No.

Mr. Gardner. Yet you think in about 25 years it will either pay to concentrate your furnace supplies at Los Angeles or to ship your Utah ore east for smelting.

Mr. Sellwood. Yes. I think it will come in time.

Mr. Gardner. Well, I am much obliged. That is just what I wanted to get.

The Chairman. Now, taking up these mines here that you have given me. I have asked you about the Adams mine. Take the Auburn: is that an open-pit mine?

Mr. Sellwood. Yes.

The Chairman. Reached by what railroad?

Mr. Sellwood. The Iron Range—Duluth & Iron Range.

The Chairman. The Canisteo?

Mr. Sellwood. I know very little about that. That is in the western district.

The Chairman. Ten million tons.

Mr. Sellwood. Mr. Cole, when you come to him, he can tell you about it.

The Chairman. Do you know, Mr. Cole, whether the Canisteo is an open-pit proposition?

Mr. Cole. Yes; a portion of it is an open-pit proposition.

The Chairman. I will swear Mr. Cole just for this purpose. You swear that the statement you make is true?

Mr. Thomas F. Cole. Yes.

The Chairman. How much of that mine is stripped?

Mr. Cole. At the present time, I should say about 50 acres.

The Chairman. What is the depth of the strippings?

Mr. Cole. It will average between 45 and 60 feet.

The Chairman. Was it stripped at the time of the making of the Hill ore lease?

Mr. Cole. I am not sure. I don't believe—there was no heavy stripping that had been carried down to the ore bodies, at least.

The Chairman. Has it been operated to any great extent since?

Mr. Cole. Yes, sir.

The Chairman. To what extent?

Mr. Cole. It has been operating each year. I believe they shipped over a million tons in 1910. I have not seen the statement for 1911.

The Chairman. Now, Mr. Sellwood, take the Canton mine next, estimated at 3,100,000 tons. Is that an open-pit proposition?

Mr. Sellwood. No, sir; underground.

The Chairman. What is the difference between getting out a ton of ore from a mine already stripped and getting one out underground, on an average; I mean, other conditions being alike?

Mr. Young. You mean in the Mesabi district?

The Chairman. Yes; in the Mesabi district.

Mr. Sellwood. Well, you are doing pretty well to get an underground ore out at much less than a dollar a ton.

The Chairman. Now, take the Chisholm mine, 7,000,000 tons; is that an open-pit proposition?

Mr. Sellwood. No.

The Chairman. Underground?

Mr. Sellwood. Yes; underground.

The Chairman. The Duluth mine; do you know about that?

Mr. Sellwood. Yes, sir.

The Chairman. What is it?

Mr. Sellwood. That is an underground mine mostly.

The Chairman. The Genoa mine, 2,000,000 tons?

Mr. Sellwood. That is underground.

The Chairman. The Gilbert?

Mr. Sellwood. I could not say.

The Chairman. Do you know about that, Mr. Cole—the two Gilbert mines, estimated at about 14,000,000 tons?

Mr. Cole. That is an open-pit proposition.

The Chairman. What is the depth of the stripping there?

Mr. Cole. Average about 40 feet.

The Chairman. And how many acres stripped?

Mr. Cole. My last knowledge, about 30 acres.

The Chairman. When was the stripping done?

Mr. Cole. Largely prior to 1908.

The Chairman. What roads reach there?

Mr. Cole. The Duluth & Iron Range serves the mine, and the Duluth, Missabe & Northern also reaches the property.

The Chairman. Now, Mr. Sellwood, the Glenn mines, estimated at 7.600.000 tons in round numbers, do you know anything about them?

Mr. Sellwood. Yes, sir.

The Chairman. What are they?

Mr. Sellwood. Underground mines.

The Chairman. The Hartley mine?

Mr. Sellwood. As I understand it, the Hartley is an underground mine, but I am not sure; not positive.

The Chairman. Do you know about that, Mr. Cole?

Mr. Cole. That is an underground proposition.

The Chairman. The Holman mine?

Mr. Sellwood. I don't know about that.

Mr. Cole. Open pit.

The Chairman. Do you know how much of it is stripped?

Mr. Cole. About 20 acres; possibly more.

The Chairman. When was that stripped?

Mr. Cole. Prior to 1909.

The Chairman. When did you commence stripping that mine?

Mr. Cole. I can not tell you just the exact time, but several years ago.

The Chairman. With reference to the Hill ore lease, when was it stripped, before or after making that lease?

Mr. Cole. I think the start was made, at least, getting in the machinery and digging the shaft to pump water out of the property, was made before the execution of the Hill ore lease.

The Chairman. The Hull mines were stripped before the Hill ore lease?

Mr. Cole. The stripping has been carried on at the Hull-Rust mine for a great many years.

The Chairman. There was quite an area stripped at the time the Hill lease was made?

Mr. Cole. Yes.

The Chairman. The Leonidas, 10,000,000 tons; do you know about that, Mr. Sellwood?

Mr. Sellwood. Yes.

The Chairman. Is that an open-pit proposition?

Mr. Sellwood. No. My impression is it was an underground mine.

Mr. Cole. They own the fee in that property, and I am under the impression they are not mining at the present time.

The Chairman. The McKinley mine?

Mr. Cole. Open pit.

The Chairman. How much is stripped there?

Mr. Sellwood. I don't know; perhaps 10 or 15 acres.

The Chairman. Do you know when the stripping was done?

Mr. Cole. Several years ago.

Mr. Sellwood. Several years ago.

The Chairman. Now, taking this McKinley mine, do you know when it was stripped?

Mr. Sellwood. I do.

The Chairman. When was it stripped?

Mr. Sellwood. About 10 years ago.

The Chairman. The Minnowas?

Mr. Sellwood. That is an underground mine.

The Chairman. The Mesabi Mountain?

Mr. Sellwood. That is a stripping mine.

The CHAIRMAN. When was that mine stripped?

Mr. SELLWOOD. That was stripped as much as 10 years ago.

The CHAIRMAN. How much stripping is done there?

Mr. SELLWOOD. You might say—about eight years ago.

The CHAIRMAN. What is the depth of the stripping?

Mr. SELLWOOD. An average of 30 feet.

The CHAIRMAN. What road serves it?

Mr. SELLWOOD. The Missabe & Northern.

The CHAIRMAN. The Monroe mine. I asked about that.

Mr. SELLWOOD. Yes.

The CHAIRMAN. Do you know when that was stripped—how long ago?

Mr. SELLWOOD. Oh, that was, I should say, from five to seven or eight years ago. It took them two or three years to strip it.

The CHAIRMAN. When was the Morris mine stripped?

Mr. SELLWOOD. How?

The CHAIRMAN. When was the Morris mine stripped?

Mr. SELLWOOD. That has been in the course of stripping for the last four or five years.

The CHAIRMAN. The Myers mines. Do you know about those mines?

Mr. SELLWOOD. Myers?

The CHAIRMAN. Yes.

Mr. SELLWOOD. I don't believe I got that name right.

The CHAIRMAN. The Myers. Do you know about that, Mr. Cole?

Mr. COLE. Yes, sir; an underground mine.

The CHAIRMAN. The Norman mine?

Mr. SELLWOOD. The Norman is an open-pit stripping property?

The CHAIRMAN. When was it stripped?

Mr. SELLWOOD. As much as 16 years ago.

The CHAIRMAN. How much is stripped there and to what depth?

Mr. SELLWOOD. The stripping would cover, I think, 25 or 30 acres, and the depth would be about 30 feet.

The CHAIRMAN. What road serves it?

Mr. SELLWOOD. The Missabe & Northern.

The CHAIRMAN. The Ohio mine. When was it stripped?

Mr. SELLWOOD. It is not stripped.

The CHAIRMAN. It is not stripped?

Mr. SELLWOOD. No.

Mr. COLE. The Ohio?

The CHAIRMAN. Yes; the Ohio. I understood you to say that was an open-pit proposition?

Mr. COLE. Yes.

Mr. SELLWOOD. It is a stripping proposition, but it is not stripped.

The CHAIRMAN. What road reaches it?

Mr. SELLWOOD. Missabe & Northern.

The CHAIRMAN. The Penobscot mine?

Mr. SELLWOOD. The Penobscot—that is underground.

The CHAIRMAN. The Pillsbury mines?

Mr. SELLWOOD. That is stripping.

The CHAIRMAN. When were they stripped?

Mr. SELLWOOD. They have been stripped for four or five years.

Mr. REED. Would it not be more satisfactory to give that list to Mr. Sellwood and let him prepare a statement?

The CHAIRMAN. Well, am nearly through now. What road reaches those mines?

Mr. SELLWOOD. The Duluth, Missabe & Northern.

The CHAIRMAN. When were those Rust mines stripped?

Mr. SELLWOOD. They are in the course of stripping now, and have been in the process for five or six years.

The CHAIRMAN. Were they stripped enough to expose the ore five years ago?

Mr. SELLWOOD. Oh, yes; stripped a great deal of it by steam shovel.

The CHAIRMAN. I asked you about the Sauntry mine. That is an open-pit proposition?

Mr. SELLWOOD. Yes.

The CHAIRMAN. When was it stripped?

Mr. SELLWOOD. That was stripped along about 1897 and 1898, and some since.

The CHAIRMAN. And it is reached by what road?

Mr. SELLWOOD. The Duluth, Missabe & Northern.

The CHAIRMAN. The Sellers mine, estimated about 40,000,000 tons—45,000,000?

Mr. SELLWOOD. That is open pit.

The CHAIRMAN. When were they stripped?

Mr. SELLWOOD. They have been stripping there for the past 8 or 10 years, and are still at it, but they are mining some ore also.

The CHAIRMAN. They had ore exposed at the time the Hill ore lease was made?

Mr. SELLWOOD. Yes.

The CHAIRMAN. And what road reaches those mines?

Mr. SELLWOOD. The Duluth, Missabe & Northern.

The CHAIRMAN. When was the Sharon mine stripped?

Mr. SELLWOOD. The Sharon mine—I should say about 10 years ago.

The CHAIRMAN. And what road reaches it?

Mr. SELLWOOD. The Duluth, Missabe & Northern.

The CHAIRMAN. And when was the Spruce mine stripped?

Mr. SELLWOOD. The Spruce, what has been stripped, I think, has been stripped about five or six years.

The CHAIRMAN. And it is reached by what road?

Mr. SELLWOOD. The Duluth & Iron Range, I think.

The CHAIRMAN. St. Clair?

Mr. SELLWOOD. The St. Clair?

The CHAIRMAN. Yes.

Mr. SELLWOOD. That is an underground mine.

The CHAIRMAN. The Stephens mines?

Mr. SELLWOOD. That is an open-pit mine.

The CHAIRMAN. When were they stripped?

Mr. SELLWOOD. They were stripped about 10 or 12 years ago.

The CHAIRMAN. What road reaches them?

Mr. SELLWOOD. The Duluth & Iron Range.

The CHAIRMAN. The Sweney mine?

Mr. SELLWOOD. The Sweney mine is a stripping proposition, but it is not stripped.

The CHAIRMAN. The Tener mine?

Mr. SELLWOOD. The Tener is a stripping proposition.

The CHAIRMAN. Is it stripped?

Mr. SELLWOOD. Yes.

The CHAIRMAN. When was it stripped?

Mr. SELLWOOD. I would say about eight years ago—from five to eight years ago.

The CHAIRMAN. What road reaches it?

Mr. SELLWOOD. The Duluth, Missabe & Northern.

The CHAIRMAN. And the Union mine?

Mr. SELLWOOD. The Union mine is stripped.

The CHAIRMAN. When was it stripped?

Mr. SELLWOOD. It has been stripped within the last two or three years.

The CHAIRMAN. What road reaches it?

Mr. SELLWOOD. I rather think both roads reach it—both the Missabe & Northern and the Iron Range.

The CHAIRMAN. The Winifred mine?

Mr. SELLWOOD. That is an underground mine.

The CHAIRMAN. The Clark mine?

Mr. SELLWOOD. That is an underground mine.

The CHAIRMAN. I have no further questions. Mr. Danforth?

Mr. DANFORTH. No.

The CHAIRMAN. I haven't anything else that I can think of.

Mr. YOUNG. Just a question, Mr. Sellwood. I understood you to say, in answer to one of the chairman's questions, that you did not know any good business reason why the Steel Corporation should take this Hill lease when it had these large bodies of ore that were stripped and ready to ship. I understood you to say just a little before that, in answer to a question by Mr. Gardner, that you thought that a company with so extensive plants as the Steel Corporation ought to get more ore than 500,000,000 tons, or 25 years' supply?

Mr. SELLWOOD. Yes.

Mr. YOUNG. Now, which proposition do you stick to?

Mr. SELLWOOD. Well, I stick to the proposition that they should get all the ore they could get at a reasonable price. I think that was the proposition that I made.

The CHAIRMAN. That was his statement in the beginning.

Mr. SELLWOOD. At a reasonable price.

Mr. YOUNG. You think the price was too high?

Mr. SELLWOOD. I do not think it was a reasonable price for all those ore lands of Mr. Hill's.

Mr. YOUNG. You think the price was unreasonable?

Mr. SELLWOOD. I do, where it continued along increasing every year, for some of the property. For other of the property, such as the Dale and Leonard and two or three other properties that were opened, I said I would be glad to give a dollar a ton for it, and offered to do it; but when you take in a great big proposition, where the ore is good, bad, and indifferent and the royalty and the minimum increasing every year, I do not see why that should be done.

Mr. YOUNG. That was your criticism on what was done?

Mr. SELLWOOD. Yes.

The CHAIRMAN. If they could have gotten a lease on that property at 25 cents a ton and taken out 500,000 tons a year it would be a very good proposition?

Mr. Sellwood. Yes.

The Chairman. But that thing of taking out so many million tons every year and so many million more each year, and then going up 3 cents a ton and hauling it over the other fellow's road looked kind of like somebody was getting the worst of it?

Mr. Sellwood. I don't know why it was done. Some of the leases were all right.

The Chairman. Isn't that one of the most mysterious things that ever happened on that range to you as a practical ore man?

Mr. Sellwood. Well, it only happened once.

Mr. Young. There has not been any opportunity for it to happen but once, has there?

Mr. Danforth. Mr. Hill thought that the Steel Corporation made a bad mistake in letting it go, and so expressed himself to us. You haven't any comments to make on that, Mr. Sellwood?

Mr. Sellwood. No.

Mr. Danforth. He is a pretty wise man, is he not?

Mr. Sellwood. Mr. Hill?

Mr. Danforth. Yes.

Mr. Sellwood. Yes, sir; there is no question about that.

The Chairman. Oh; one or two questions more. Had the Northern Pacific any interest in these leases—in that Hill ore lease?

Mr. Sellwood. What is that?

The Chairman. Had the Northern Pacific any holdings in that Hill ore proposition?

Mr. Sellwood. Yes; they had one 40 and possibly one 20 or 30. The 40 acres I offered to give $1 a ton for was owned by the Northern Pacific and not by the Great Northern. I know we trespassed there one time, and we had to pay the Northern Pacific damages.

The Chairman. Mr. Sellwood, this list you gave us here—very kindly—of the various holdings of the Steel Corporation—it is copied from the books of the Minnesota Tax Commission?

Mr. Sellwood. Yes.

The Chairman. How did you happen to take it from that source?

Mr. Sellwood. The clerk of the board sent me that copy.

The Chairman. And you regard it as absolutely reliable?

Mr. Sellwood. Yes.

The Chairman. Did you make any further inquiry there to find out what per cent the Minnesota Tax Commission found the Steel Corporation's holdings to be of the entire area?

Mr. Sellwood. No; I don't think they ever figured it out there. That is what I copied from their statement.
for taxation—that is, not sufficiently developed to be listed for taxation, is it not?

Mr. Sellwood. Yes.

Mr. Young. It is not the statement of the company, but the statement of the tax commission?

Mr. Sellwood. Yes; that is what I said.

The Chairman. It is the statement of the tax commission of the holdings of the Steel Corporation for the purposes of taxation?

Mr. Sellwood. Yes.

The Chairman. But they have a good many ores that are not listed for taxation—that is, not sufficiently developed to be listed for taxation—yet the ore is there?

Mr. SELLWOOD. They are all listed for taxation. Some of them may be prospects or reserve ore, but all of them are supposed to be listed for taxation.

The CHAIRMAN. The northwest prospect—N. W. I.—do you know whether the Northern Pacific has any interest in that or not?

Mr. SELLWOOD. No, sir; I do not.

The CHAIRMAN. That is all.

Mr. SELLWOOD. Are you through with me, Mr. Stanley?

The CHAIRMAN. Yes, Mr. Sellwood; and we are very much obliged to you.

Mr. SELLWOOD. Thank you very much.

The CHAIRMAN. The committee stands adjourned until to-morrow morning at 10.30.

Whereupon, at 5.05 p. m., adjournment was taken until April 18, 1912, at 10.30 o'clock a. m.

No. 63

UNITED STATES STEEL CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

SATURDAY, APRIL 13, 1912

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

UNITED STATES STEEL CORPORATION.

Committee on Investigation
of the United States Steel Corporation,
House of Representatives,
Saturday, April 13, 1912.

The committee this day met, Hon. Augustus O. Stanley (chairman) presiding.

The Chairman. Gentlemen, we will come to order.

FURTHER STATEMENT OF MR. THOMAS F. COLE.

The Chairman. You may proceed with the examination, Mr. Young.

Mr. Young. Where is your residence, Mr. Cole?

Mr. Cole. Duluth, Minn.

Mr. Young. Where were you born?

Mr. Cole. I was born in northern Michigan.

Mr. Young. And lived in northern Michigan until what time?

Mr. Cole. Until 1901.

Mr. Young. And then you went to Duluth?

Mr. Cole. Yes, sir.

Mr. Young. During all of this time you have lived in or adjacent to a mining district?

Mr. Cole. Yes, sir.

Mr. Young. And when and what was your first employment in or about the mines?

Mr. Cole. I started work on the surface of mines in Keweenaw County, Mich., and worked around mills or railways in transporting rock from mines, and around iron-ore mines, extending over a long period of years.

Mr. Young. When did you begin?

Mr. Cole. I began working a little after 1870, between 1870 and 1871.

Mr. Young. When were you born?

Mr. Cole. 1862.

Mr. Young. In these earlier years you were working as a laborer?

Mr. Cole. For many years; yes, sir.

Mr. Young. When did you first have any other employment?

Mr. Cole. I started in work of a clerical capacity in 1884.

Mr. Young. With what mines was that?

Mr. Cole. The Calumet and Hecla mines.

Mr. Young. How long did you remain at the Calumet and Hecla?

Mr. Cole. I remained two years after that time, but was with them for a total period of 10 years.

Mr. Young. And you went from there to what place?

Mr. Cole. To the Chapin mine, the iron mountain in Michigan.

Mr. Young. In what capacity were you working there?

Mr. Cole. Chief clerk and cashier.

Mr. Young. Up to what time?

Mr. Cole. Up until 1889.

Mr. Young. And from the Chapin you went where?

Mr. Cole. I took charge of mines in Marquette County in 1889.

Mr. Young. The Queen group?

Mr. Cole. Yes, sir.

Mr. Young. And that was with what firm?

Mr. Cole. That was with the Queen Iron Mining Co.

Mr. Young. Ferdinand Schlessinger?

Mr. Cole. Mr. Schlessinger, of Milwaukee, and other gentlemen associated with him were interested.

Mr. Young. You were with them until what time?

Mr. Cole. Until 1897. I remained in charge of those mines and other mines until 1897.

Mr. Young. What were the other mines?

Mr. Cole. Some mines on the Mesabi Range; mines on the Gogebic, for instance, and mines on the Menominee Range.

Mr. Young. In 1897 you went with the Oliver Mining Co.?

Mr. Cole. The Oliver Iron Mining Co.

Mr. Young. And you continued with the Oliver Mining Co. after it had been absorbed by the United States Steel Corporation?

Mr. Cole. The Oliver Iron Mining Co. did all of the work of mining in the Lake Superior district for the United States Steel Corporation.

Mr. Young. Yes.

Mr. Cole. The organization has always been kept intact and work carried on under the name of the Oliver Iron Mining Co.

Mr. Young. What was your position with the Oliver Iron Mining Co.?

Mr. Cole. I took the position of general superintendent of mines on the Gogebic Range. After we got the work started and going in good shape I took on other burdens, operating mines in Minnesota, and was given the title of general manager. On the organization of the United States Steel Corporation I was made president of the Oliver Iron Mining Co.

Mr. Young. And remained such until what time?

Mr. Cole. Until three years ago, sir.

Mr. Young. And you had general charge of all the mining operations in the Lake Superior district for the Steel Corporation properties?

Mr. Cole. I did.

Mr. Young. Are you familiar with the question of the ore holdings of the Steel Corporation in Lake Superior?

Mr. Cole. I was fairly familiar with this up until three years ago, sir.

Mr. Young. Have you made any estimate as to how much ore they own on the different ranges?

Mr. Cole. We had such estimates compiled from time to time.

Mr. Young. What would you say as to a fair estimate of the total holdings on the Mesabi Range of the Steel Corporation and subsidiaries. When I use the term "Steel Corporation," I mean its subsidiaries as well.

Mr. Cole. Excluding the ore on the lands covered by the so-called Hill lease, I should say that the Steel Corporation's holdings on the Mesabi and Vermillion Ranges, both in Minnesota——

Mr. Young. Yes.

Mr. Cole (continuing). Would be in excess of 750,000,000 tons.

Mr. Young. Now, what proportion of that was on the Mesabi?

Mr. Cole. All but probably twenty to twenty-five million tons.

Mr. Young. Could you give an estimate of the holdings in Michigan of the Steel Corporation? I think that according to Mr. Finley's estimate it was shown as a little over 54,000,000 tons.

Mr. Cole. Mr. Finley's estimate was made during the year 1911?

Mr. Young. Yes.

Mr. Cole (continuing). But I am quite sure that the tonnage he took for valuation purposes, for taxation, was fairly accurate. Therefore I should say that their holdings in Michigan are very close to the figures he has given, as far as known tonnage at this time is concerned.

Mr. Young. Is that greater or less than the known tonnage at the time you left the corporation?

Mr. Cole. I should say it is somewhat in excess of the known tonnage at that time.

Mr. Young. Would that statement also apply to the independent holdings in the Michigan ranges?

Mr. Cole. Yes, sir.

Mr. Young. Say, for instance, the Newport, which has developed very large mines since that time?

Mr. Cole. They knew the ore existed, and were developed three years ago.

Mr. Young. Yes; but they had not begun to ship any large quantities.

Mr. Cole. During the last three years they have shipped large quantities.

Mr. Young. Yes; but I mean previous to that.

Mr. Cole. Previous to that time they were developing the ore that was known to exist.

Mr. Young. And since that time the Swanzey district, in Marquette County, was very largely developed?

Mr. Cole. During recent years large additions to the ore reserves on the Marquette Range have been found.

Mr. Young. Although that range has been worked ever since 1855?

Mr. Cole. Yes, sir.

Mr. Young. I presume you will agree with the statement of other witnesses that it is a good deal easier to estimate the tonnage on the Mesabi Range than on the other ranges, that you could get at it more accurately?

Mr. Cole. Yes, sir.

Mr. Young. Could you make any estimate of the ores on the Mesabi Range owned by independent operators—operators independent of the Steel Corporation, I mean? We have gotten into the habit of using that term here as distinguished from the Steel Corporation.

Mr. Cole. Excluding the ores in the lands covered by the so-called Hill lease and putting that in as independent ore, I should say that the ore holdings on the Mesabi Range held by the independents were nearly equal to the amount held by the United States Steel Corporation.

Mr. Young. Then, your idea would be that the Steel Corporation owns a trifle over 50 per cent of all of the ore on the Mesabi Range?

Mr. Cole. Yes, sir.

Mr. Young. In addition to that, twenty or twenty-five million tons on the Vermilion Range, and a little over a quarter of the ores in Michigan?

Mr. Cole. Yes, sir.

Mr. Young. That would be about right?

Mr. Cole. Yes, sir.

Mr. Young. Could you form a judgment, Mr. Cole, as to the value per ton of all of the ores on the Mesabi, averaging this tonnage that you speak of as seven hundred and fifty millions?

Mr. Cole. Well, there is a great difference of opinion as to the value of ores in the ground as an inert mass lying there. Except to be held in reserve, to be taken out over a period of years and manufactured into iron and steel, to make it commercially valuable, it is of but little value, but when held as a reserve, I should say that it would be reasonable to put a valuation of somewhere between 30 and 50 cents per ton on such ores.

Mr. Young. That is, taking the whole thing?

Mr. Cole. Yes, sir; all of that ore now rated as merchantable and about which I am testifying.

Mr. Young. Yes; the 750,000,000. Some question has been raised, Mr. Cole, as to why the Steel Corporation should have taken the Hill lease when it had such large tonnages, stripped and ready to ship out, at the time it acquired that lease. Can you throw any light on that question?

Mr. Cole. The Oliver Iron Mining Co., which was the operating company, handling the work of mining, preparing the mines, getting the openings advanced, and getting them all equipped and in shape for production, so that the ores could be mined, graded, and transported during the shipping season, always had to be prepared for what we call emergencies. For instance, at one time I know they called upon us during the midst of a shipping season for an increase of 80 per cent in shipments, and within three days that ore was being forwarded, the additional ore as well as the regular amount. Therefore it is necessary and essential that mines be developed away ahead of actual needs for the possibilities. At times, when the demand for steel products was great in this country, we would be called upon for very large additional tonnages of ore, and it had to be forwarded during the months of open navigation.

Mr. Young. Did I understand you to say that demands were made on you to increase your output 80 per cent, and that within three days you had accomplished that?

Mr. Cole. Shipments, I am talking of, Mr. Young.

Mr. Young. Yes.

Mr. Cole. Within three days that tonnage was being forwarded, with the additional tonnage.

Mr. Young. Was that one of the reasons for doing this preparatory work ahead, so that you would be enabled to meet emergencies of that kind?

Mr. Cole. Not only to meet any certain emergency that came upon the situation up there, but to meet the extraordinary demand that may be entailed during an entire year. In years of great prosperity we had to be in a position to furnish very large tonnages of the material, all graded, so that it could be used and converted into steel and sold. Therefore the mines had to be opened and developed away ahead of the apparent actual needs, at some periods.

Mr. YOUNG. Has there been a very rapid increase during the last 20 years, we will say, in shipments from the Lake Superior district?

Mr. COLE. Yes, sir.

Mr. YOUNG. What is true in that regard as to the shipments of ore I suppose is also true of the manufacture of steel, the tonnages?—

Mr. COLE. Yes, sir.

Mr. YOUNG. I see in this table in Hurd's Manual we have introduced in evidence here that in 1896 the total shipments of ore from Lake Superior district were only 9,934,000 tons, while in 1910, 15 years later, there were 43,350,000 tons. In making your preparations did you take into account this rapid growth of business in the past, and the anticipation that it may continue in the future?

Mr. COLE. We did.

Mr. YOUNG. What has been the policy of the company——

Mr. COLE. Mr. Young, pardon me. I would like to qualify that answer by saying that we hardly anticipated the same percentage of growth going on forever; for, when you get up into the larger, the enormous tonnages, you could hardly reasonably expect that the iron and steel business of this country would double in each decade.

Mr. YOUNG. The shipment of iron ore from Lake Superior seems to have quadrupled in 15 years; but you did expect that it would be largely increased?

Mr. COLE. Yes, sir.

Mr. YOUNG. What was the policy of the Oliver Iron Mining Co., operating for the Steel Corporation, as to the use of the lower grade of ores?

Mr. COLE. In our mining operations we conserved the ore material that had very low iron contents. We either left it in such state that it could be secured in later years, as our mining operations progressed, or we took it out and deposited it at some convenient point on the surface, so that it could be secured afterwards. Whenever it could be consumed, we also consumed large quantities of fairly low-grade material.

Mr. YOUNG. What was your purpose in the consumption of the lower-grade ores, when you had higher-grade ores on hand?

Mr. COLE. Just to conserve our ore deposits.

Mr. YOUNG. So that you would not be brought to a time when you had nothing but low-grade ores?

Mr. COLE. Yes, sir.

Mr. YOUNG. To stretch that period out?

Mr. COLE. Yes, sir.

Mr. YOUNG. The suggestion has been made, Mr. Cole, either directly or by innuendo, a good many times, that the only purpose the United States Steel Corporation could have had for acquiring the Hill lease was to monopolize the ores of the Lake Superior district. I would like to have any suggestion that you could make along that line, as to whether or not that was true, and if it were not true, to go fully into the reasons for the acquiring of that property in the manner in which it was acquired.

Mr. COLE. The ore deposits on the Mesabi Range as a rule are covered only with glacial drift. They are flat lying and can be readily explored by the use of churn or diamond drills, the surface covering removed from over the ore bodies, and the ore, or at least quite a large percentage of it, mined with steam shovels, making the mining cost reasonably low, very much lower than the cost for mining iron ores on the so-called older ranges, such as Vermillion in Minnesota and the ore ranges in Wisconsin and Michigan.

Mr. YOUNG. Yes.

Mr. COLE. The lands that Mr. Hill proposed to lease to the United States Steel Corporation were all located on the Mesabi Range. We felt that there was a very considerable tonnage of high-grade ore existing on these lands. We believed that it could be won at a very reasonable cost. We differed with the opinion of the engineers employed by Mr. Hill as to the probable quantities of ore on the lands. We made estimates of what the probable tonnages would be. We based our estimate on what exploratory work and other work had been done on the land. Exploratory work had been conducted on contiguous land, and we based our estimates on that also, and our engineers could not agree with the estimated tonnages of the engineers that Mr. Hill had in his employ. As a business proposition, with a surrender clause in the lease, and the fact that the ores on that range could be won at a very much lower mining cost than on the old ranges, we felt that it would be wise to secure that ore territory, explore it thoroughly, and be guided by the result of those explorations as to whether the lease would be held beyond the 1915 period or not. We felt that we could not lose any money, that we surely would get ore enough to justify the expenditure of exploring and developing the mines necessary to take the quantities out that were called for by the lease without loss to the company, and therefore that it would be a good business proposition to secure those lands and ascertain if they contained the very large tonnages that Mr. Hill's engineers estimated were in the lands.

Mr. REED. How much did they estimate it, Mr. Cole?

Mr. COLE. Their talk, as I understand it, at the time was five hundred, six hundred, or possibly seven hundred million tons; maybe more.

Mr. YOUNG. How many years' reserve did you figure that you had in your own holdings, aside from the Hill lease, taking into consideration the probable growth in the demands or requirements?

Mr. COLE. We figured, as far as its rated merchantable ore was concerned, we probably had 40 years' supply at the present rate of reduction.

Mr. YOUNG. Yes; at the present rate of reduction.

Mr. COLE. At the then present rate of reduction.

Mr. YOUNG. In your old properties?

Mr. COLE. That was allowing pretty liberally for extensions of ore bodies and probably new ore bodies that we would find.

Mr. YOUNG. Considering the amount of investment the company had in the plant, did you not regard from 30 to 40 years' supply as eminently sufficient?

Mr. COLE. Any concern as large as the United States Steel Corporation ought to figure as far ahead as they possibly could figure, to be in a position to meet their needs for a long period of years. Forty years is a very short time in the lifetime of this world and the world's work.

Mr. Young. In the negotiations that led up to the taking of the Hill lease, was there any proposition made for the absolute purchase of this land? Was there anything considered except a lease?

Mr. Cole. I knew of nothing except a lease. Negotiations were principally transacted or carried on in the East.

Mr. Young. Do you know whether there was any serious question raised about the surrender clause, which gave you the right to surrender the lease within any time before 1915?

Mr. Cole. I am unable to tell you as to that, as to whether there was any difference of opinion on both sides or not.

Mr. Young. I suppose you were in consultation with the eastern people about these ores and this lease before it was taken?

Mr. Cole. Yes, sir; we had a number of conferences on the subject before the lease was executed.

Mr. Young. Did you raise any question as to the importance of this surrender clause?

Mr. Cole. I did not. The fact that there was a serious difference in the tonnages the estimated tonnages of the ore in the ground, was quite sufficient to our people to insist on having a surrender clause in it.

Mr. Young. Do you remember, or do you know, about what minimum the Steel Corporation has paid in excess of the amount of ore that it has moved up to date?

Mr. Cole. I can not give the tonnages.

Mr. Young. Well, can you give something near it? Can you give us some idea?

Mr. Cole. I should say that on some of their properties, outside of the Hill lease, they are probably in arrears from ten to twelve million tons, for conditions during the past three or four years have not been normal in the steel business.

Mr. Young. Will they be able to remove, before the termination of the lease in 1915, all the ore they paid for, on the minimum?

Mr. Cole. They should be able to do so, if they go at it vigorously.

Mr. Young. Has it been expensive to develop these ores on the Hill lease property; strip them and get them in shape?

Mr. Cole. No, sir. The ore bodies that contain good, merchantable ore could be exposed, the surface covering removed, at a very reasonable cost per ton.

Mr. Young. Have you any estimate of the cost to do that?

Mr. Cole. The work was started before I left the employ of the Oliver Iron Mining Co. I should say that a figure around 12 cents per ton of ore uncovered would nearly pay for it.

Mr. Young. Pay for all the expenses of development?

Mr. Cole. Yes, sir. A great portion of the work has been accomplished since I left their employ.

Mr. Young. Yes, sir.

Mr. Cole. Twelve cents should cover that expense, or very close to it; that is, for the surface stripping alone. You would have to charge out the plant equipment in addition to that, which would be utilized in removing the ore after the surface stripping was removed.

The Chairman. Do you mean by making that sort of an estimate of 12 cents a ton, that you would add 12 cents a ton for all the ore exposed, to cover the cost of removing the overburden?

Mr. Cole. The cost of removing the overburden.

The CHAIRMAN. Suppose you had a vein of ore 50 feet thick, as thick as this room, and you had 60 feet of overburden, would it pay you to take off that 60 feet of overburden to get the 50 feet of ore?

Mr. COLE. Yes, sir.

The CHAIRMAN. Then, you would estimate 12 cents a ton on the ore in the body to cover the cost of removing the 60 feet above it?

Mr. COLE. Yes, sir.

The CHAIRMAN. Now, if the ore were 100 feet thick, you would only estimate half so much; is that the idea?

Mr. COLE. No; the 12 cents a ton is to cover the ore produced where the stripping exceeds the thickness of the ore body considerably. In some cases, it would be the other way. I have given you an average figure.

The CHAIRMAN. What is the average thickness in the Mahoning mining district. The ore is estimated, I believe, at about 200 feet deep, is it not?

Mr. COLE. Yes, sir; in the deepest part of the channel it is undoubtedly 300 feet thick. For instance, I will take this illustration so as to elucidate this matter and get it clearly in your mind, and quickly: If we had a body of ore that was 60 feet thick and 60 feet overburden, when you remove 60 feet overburden you uncover a yard of ore for each yard of material moved, and each yard of ore, generally speaking, contains nearly 2 tons of iron ore. Now, you know what it costs to move a yard of surface material?

The CHAIRMAN. No; I do not.

Mr. COLE. Well, it varies all the way from 32 cents per yard down to—we have costs as low as 13 cents a yard in some months.

The CHAIRMAN. An average of about 20 cents?

Mr. COLE. Well, about 24 cents. Where you are taking the operations on a fixed broad scale, I think that is pretty close.

The CHAIRMAN. When you come to the ore can you handle a cubic foot of ore at the same cost as you handle a cubic foot of earth?

Mr. COLE. Under certain conditions you can.

The CHAIRMAN. Under the average conditions?

Mr. COLE. But under the average conditions you can not, because you have to be so careful in grading your ores. You have to have steam shovels located in various parts of your pits. This ore has to be graded so closely during the shipping season of navigation that your phosphorus must be, in all the ore in that cargo, one or two thousandths of your gravity; it must be within a quarter of a per cent of silicate, and therefore it is necessary that you move each day from various parts of your mine and various parts of your pit a certain quantity of different grades of ore in order that it can go down in a steady, continual stream to the ore dock and be sorted out, and certain parts and grades of each kind of ore loaded into each ship so that it is exactly right.

The CHAIRMAN. Is that sorting done at the mine or at the docks?

Mr. COLE. It is largely done at the mines, and then again in the sorting yards above the docks, where the loaded ore trains are dropped by the road locomotives and taken by the switch engines and sorted out into certain tonnages for each ship, and then it is taken to the ore docks and dumped.

The CHAIRMAN. When you have an open-pit mine, you have a space exposed as large as this building; it is usually that large, if not much larger; it would not be much of an opening, a place the size of this building?

Mr. Cole. No; you are quite right.

The Chairman. The bottom of it is flat, and the ore runs horizontally?

Mr. Cole. Yes.

The Chairman. And you lay concentric circles of tracks in there?

Mr. Cole. In some cases.

The Chairman. And you have a dozen steam shovels in that mine?

Mr. Cole. Yes, sir.

The Chairman. In sorting that ore, only one steam shovel would be operating on the ore that contains excessive phosphorus, would it not?

Mr. Cole. Yes, sir.

The Chairman. And the other steam shovels would be sorting the Bessemer or non-Bessemer ore at some other point of that mine?

Mr. Cole. Yes, sir.

The Chairman. And that sorting consists of the assembling of those cars to a great extent?

Mr. Cole. Well, you have to work part of your pit during a portion of the day and another part during the remainder of the day. You have to keep switching your crews.

The Chairman. It is a question of assembling the cars rather than lifting the ore, is it not? You do not take a steam shovel and dip up one shovelful of ore here that contains too much phosphorus and the next time the steam shovel comes up it contains less phosphorous?

Mr. Cole. Very true.

The Chairman. You have a car that, we will say, is in excess of four-tenths of 1 per cent of phosphorus, and you have a car over here that has none—two cars with an average of two-tenths of 1 per cent of phosphorus?

Mr. Cole. Yes.

The Chairman. And you arrange the grades of ore, or the assembling of it, on these 50-ton cars, do you not?

Mr. Cole. Yes, sir; that is right.

The Chairman. Leaving out the question of the assembling of the cars, is the physical operation of lifting a cubic foot of ore more expensive than the physical operation of lifting a cubic foot of earth in your steam shovels, if it were all non-Bessemer ore?

Mr. Cole. If it were all ore of one grade or you had no vitiating elements in your ore bodies, such as Takonite pait rock and many other things. Where the ore has no vitiating elements in it, then there is no reason why the steam shovel could not lift that material almost as economically into the railway cars as the steam shovel could lift the surface stripping into the stripping cars.

The Chairman. Would the steam shovel operate as rapidly?

Mr. Cole. Nearly as rapidly.

The Chairman. Are the cubic contents of ore twice as heavy as the cubic contents of the overburden?

Mr. Cole. Yes, sir; nearly so.

Mr. Young. Now, let us get this straightened out. As I understand the chairman, his suggestion is that you have no extra expense in sorting this ore at the mine, except the handling of the ores, which is done out on the track. That is not what you mean, is it?

Mr. COLE. You would not have, Mr. Young, where the ore body was clean ore.

Mr. YOUNG. I am taking the conditions as they actually exist.

Mr. COLE. You have to pump your water from greater depths. You have vitiating circumstances and elements occurring in your ore and in nearly all the ore bodies.

Mr. YOUNG. What do you have to do when you strike those things?

Mr. COLE. You have to proceed carefully.

Mr. YOUNG. And do what?

Mr. COLE. Remove these pieces of tanite or paint rock when you encounter them, and not allow them to be lifted up by the steam shovel and put into the railroad cars.

Mr. YOUNG. How do you remove them?

Mr. COLE. According to their size. They lift them with the steam shovel at times, as being the best way to get them out of the way, and then the men pile them and leave them there until the stripping cars are brought in, and then they are taken out to the waste dumps.

Mr. YOUNG. Now, is it practicable as suggested by the chairman, where you have two grades of ore in a mine, to put one shovel over here at one grade, another shovel here at another grade, and another here at another, and another here at another, and keep those four shovels at work steadily at those points, and keep up an average?

Mr. COLE. No; you can only work them according to the number of tons of each grade you have to secure that day in order to get your averages. You may work one machine only 60 minutes a day, and you may work others 4 or 5 hours. In many cases you move some steam shovels at times and do not have such a tremendous equipment. Then you have to move the steam shovel from one part of the pit to another.

Mr. YOUNG. Will these different parts of this mine run uniform in ore, or is it changing from day to day so that you have to alter the arrangement?

Mr. COLE. It is changing from time to time.

Mr. YOUNG. And do these changes in chemical contents occur quite frequently in some mines?

Mr. COLE. Yes, sir.

Mr. YOUNG. All of that adds something to the expense?

Mr. COLE. Yes, sir; it does.

Mr. YOUNG. Do you know anything about the extent of the ore bodies anywhere else, except in the Lake Superior district?

Mr. COLE. We had a great deal of information compiled, having sent engineers to different sections of our country and different sections of the world to investigate ore deposits, to estimate tonnages, and to give us accurate data concerning the iron-ore supply of the world.

Mr. YOUNG. Have you any of that data?

Mr. COLE. I have not that data with me. I have just come here from the Southland. I have been playing golf all winter.

Mr. GARDNER. Have you a copy of that report?

Mr. COLE. No, sir.

Mr. YOUNG. Do you know anything about the Cuban deposits?

Mr. COLE. Yes, sir.

Mr. YOUNG. Have you been there?

Mr. COLE. I have.

Mr. Young. What can you say about the Cuban deposits of ore?

Mr. Cole. They have enormous bodies of ore.

Mr. Young. Where are they?

Mr. Cole. A large tonnage is located on the north coast, while over to the eastern end of the island——

Mr. Young. What do they call that district?

Mr. Cole. There are two districts really, the Myari district and the Moa district.

Mr. Young. Is there not another new district, not very well developed, farther west, the Pinar del Rio, or something like that?

Mr. Cole. This ore extends for a long distance east and west, and undoubtedly some of that ore extends or will be found in the Pinar del Rio Province.

Mr. Young. Yes.

Mr. Cole. Some of the ores are found westward of Habana, but I have never visited that section of the island.

Mr. Gardner. Pinar del Rio is entirely west of Habana?

Mr. Cole. Entirely west. I suppose those are the bodies that you are referring to?

Mr. Young. Yes. There are a number there. Then there is an old district on the south coast, is there not?

Mr. Cole. Yes, sir.

Mr. Young. It has been operated a good many years?

Mr. Cole. Yes, sir.

Mr. Young. That is relatively a much smaller deposit?

Mr. Cole. Well, it is more in the nature of the old range mines which we find in the Lake Superior district. It is a harder natured ore, hard hematite.

Mr. Young. How does the ore lay on the north coast?

Mr. Cole. Flat lying beds.

Mr. Young. How much stripping is there on them?

Mr. Cole. None.

Mr. Young. Actually come to the surface, do you mean?

Mr. Cole. Absolutely without any stripping whatsoever. The pine trees are growing in the ore bodies themselves.

Mr. Young. How much ore would you say there is in those ore bodies that have been developed up to date?

Mr. Cole. There is probably a total tonnage in excess of two billions.

Mr. Cole. Over two billions of tons.

Mr. Young. Over two thousand million tons.

Mr. Cole. Yes, sir.

The Chairman. Do you mean in that one particular place, or in all?

Mr. Cole. In this district that I referred to; not in the Pinar del Rio. That section I did not visit.

Mr. Gardner. But that is the Myari and Moa districts?

Mr. Cole. Yes; and the contiguous territory, the continuation of the ore bodies. The names of Myari and Moa are simply given as central points—villages in the districts.

Mr. Gardner. In your opinion there are 2,000,000,000 tons of that?

Mr. Cole. Yes, sir.

Mr. Gardner. How about metallic contents?

Mr. COLE. With the water eliminated the ore is dehydrated above 50 per cent.

Mr. BARTLETT. What do you mean by that, with the water eliminated and dehydrated?

Mr. COLE. The water driven off. They contain a very high percentage of moisture and the water is driven off in various ways. It is driven off by the heat in the blast furnace before reduction can occur, or it is driven off by special appliances. They have special appliances there on Nipe Bay to-day for driving off the water and nodulizing the ore.

Mr. REED. That is the way of expressing the percentage of the ore, is it not?

Mr. COLE. The usual way of expressing the percentage is dry ore.

Mr. GARDNER. In the Hill lease that term "dry ore" is used.

Mr. COLE. Yes, sir.

The CHAIRMAN. Is that an expensive process of drying the Cuban ore?

Mr. COLE. Well, I should say that that cost at the present time must be close to $1 per ton of finished product, but increased knowledge of how to do it and the handling of larger tonnages will decrease the cost from time to time.

Mr. GARDNER. $1 per ton of pig iron?

Mr. COLE. $1 per ton of ore.

Mr. YOUNG. That is nodulized ore?

Mr. COLE. Nodulized ore.

Mr. BEALL. You do not mean that the cost of $1 is simply for the operation of drying, or do you mean that is the cost of the ore after it is dried, and that the $1 per ton represents the entire cost of the ore?

Mr. COLE. The $1 per ton is the cost for drying that ore and putting it in good commercial shape for use in blast furnaces.

Mr. BARTLETT. Do you mean including the price of ore?

Mr. COLE. No, sir; that is the cost for this operation alone.

Mr. GARDNER. A ton is measured in that place after the water is driven out?

Mr. COLE. Yes, sir.

Mr. GARDNER. It takes $1 a ton to drive the water out, but it is $1 a ton for the ore after what has been taken out?

Mr. COLE. The cost is apparently high, and I think when they get to handling larger tonnages and getting a better knowledge of how to do it, they will decrease that cost to a very marked degree.

The CHAIRMAN. Let me see if I understand you. Do you mean to state that after this ore is dried and put into briquets—I believe that is what you said?

Mr. COLE. No, sir; it is nodulized—small particles of iron ore.

The CHAIRMAN. Put into briquets, too?

Mr. COLE. They have not started to briquet that material that I know of.

The CHAIRMAN. Well, you say the cost of that ore in that condition is $1, or that it is $1 in addition to whatever cost it is to them for the mining of it. prior to the time you put it through this process?

Mr. COLE. Yes, sir.

The CHAIRMAN. The drying cost is $1 a ton?

Mr. COLE. Yes, sir; at the present time.

Mr. GARDNER. How much water is there in the ore?

Mr. COLE. Twenty-four per cent.

Mr. GARDNER. Now, say there are 124 tons of ore as you pick it out. After you have dried it out there are 100 tons; is that right?

Mr. YOUNG. No; if it is 100 tons, there are 76 tons.

Mr. COLE. Yes.

Mr. GARDNER. Well, take 100 tons of ore as it is mined. After you dry it out there are 76 tons left; is that it?

Mr. COLE. Yes, sir; approximately.

Mr. GARDNER. Now, does the drying of that 76 tons cost $100 or $76?

Mr. COLE. $76.

Mr. GARDNER. That is what I wanted to get at.

Mr. YOUNG. What is the cost of mining there?

Mr. COLE. It is very low.

Mr. YOUNG. How low?

Mr. COLE. Not to exceed 10 cents per ton for mining and loading into cars.

Mr. YOUNG. Is there anything else to do?

Mr. COLE. You have to transport it down to where you either load it into the vessel or treat it.

Mr. YOUNG. Yes; but that is after you have loaded it?

Mr. COLE. Yes.

Mr. YOUNG. How far is it from a good port?

Mr. COLE. A portion of those ore bodies comes very close down to the sea, within a few miles of the harbor.

Mr. GARDNER. What harbor?

Mr. COLE. The harbor of Moa.

Mr. GARDNER. Is that a deep harbor?

Mr. COLE. Yes, sir. There are reefs outside the harbor, but there is an entrance through which ships could be brought in to load. The reefs would not prevent that.

The CHAIRMAN. Do ships enter that harbor now?

Mr. COLE. No, sir; they are not shipping there now. The only point on the north coast that they are shipping iron ore from is on Nipe Bay. That is a large bay and affords a good harbor. A heating plant has been located at that point, as well as a loading plant. A great deal of that ore is shipped in its raw condition up to the United States, and smelted in its raw condition.

Mr. GARDNER. What is the draft of the ore vessels that bring it?

Mr. COLE. They carry all the way from 4,500 tons up to 7,000 tons; so I imagine their draft must be 15 or 16 or 17 feet; possibly more. They are ocean-going vessels.

Mr. GARDNER. Nipe Bay can take very deep-draft vessels?

Mr. COLE. Yes, sir.

Mr. GARDNER. How about this other bay, Moa Bay? How deep a draft vessel can that bay take?

Mr. COLE. Twenty feet.

Mr. GARDNER. In other words, you have perfectly satisfactory means of transportation?

Mr. COLE. Yes; I think they can put vessels there to 18,000 or 20,000 tons of ore if the tonnage requirements should ever demand it.

Mr. YOUNG. Is it practicable commercially to mine that ore and use it in large quantities in the United States?

Mr. Cole. Yes, sir; whenever there is a demand for the steel products in the United States.

Mr. Bartlett. Do you know what they have been paying for it?

Mr. Cole. They have been paying 75 to 85 cents per gross ton.

Mr. Young. That could be reduced a good deal if the business should grow into a large business?

Mr. Cole. Yes, sir.

The Chairman. How far is it from Cuba to the nearest point on the continent at which that ore could be landed for use, say, at Pittsburgh?

Mr. Cole. Well, it could be landed at Norfolk, or Sparrows Point, or along the coast where they are using it.

The Chairman. How far?

Mr. Cole. Approximately a thousand miles of water transportation. Then some of the ore is shipped inland after it reaches the coast cities.

The Chairman. Would that be cheaper than lake transportation?

Mr. Cole. Eighty-five cents a ton is more costly than our lake transportation for this 800 miles, because we have better ships, better facilities.

The Chairman. If they had the same ships as are used in the lake transportation, the lake transportation ought to be a little more expensive than the ocean transportation?

Mr. Cole. A little more expensive; yes, sir.

The Chairman. Excuse me, Mr. Young.

Mr. Bartlett. How far is it from New Orleans?

Mr. Cole. The distance from New Orleans across there is much less than 1,000 miles. I can not give you the exact figures. The same is true to Galveston, but, of course, those points have not reached the stage where they are as large distributing points as they will eventually, some time in the the history of the country, for when they begin distributing large quantities of manufactures materials from some given point, then a plant will be built; but at the present time it would be useless to consider putting ores into New Orleans or Galveston to be manufactured, on account of the small quantities being distributed from those points.

Mr. Young. I see that in 1910 there was 1,451,096 tons of iron ore imported from Cuba into the United States. Do you know where the most of that went to?

Mr. Cole. There are only two concerns in the United States using ores from the island of Cuba at the present time. There may have been a little of it sold to smaller furnace plants, but my understanding is that the Bethlehem Steel Co. and Pennsylvania Steel Co., who also operate the Maryland Steel Co.'s works, are the only two large consumers of those ores in this country.

Mr. Bartlett. The Maryland Steel Co. at Sparrows Point?

Mr. Cole. Yes, sir.

Mr. Young. I see, Mr. Cole, on page 3502 of our hearings, a table showing the production in Cuba by the different companies, and I see that the production in 1910 by the Spanish-American Iron Co. was 934,092 tons. That is a subsidiary of the Pennsylvania Steel Co., is it not?

Mr. Cole. Yes, sir.

Mr. Bartlett. What is the name of that concern?

Mr. YOUNG. The Spanish-American Iron Co.

Mr. BARTLETT. A subsidiary of the Pennsylvania Co.?

Mr. YOUNG. A subsidiary of the Pennsylvania Steel Co.

Mr. BARTLETT. Yes; I thought you said the Pennsylvania Co.

Mr. YOUNG. Presumably that ore was used by the Pennsylvania Steel Co., principally?

Mr. COLE. Yes, sir; at either its plants at Steelton or at Sparrows Point.

Mr. YOUNG. Then, there seems to be another quite large shipper, the Juraguay Iron Co. (Ltd.), which produced 318,814 tons. Is that the company that owns the ores around Santiago and the south shore?

Mr. COLE. They own and control all those ores. The Bethlehem Steel Co. own the stock of the Juraguay Iron Co.

Mr. YOUNG. So this is the Bethlehem concern?

Mr. COLE. Yes, sir.

Mr. YOUNG. That is a company which has produced ore for a good many years?

Mr. COLE. Yes, sir.

Mr. GARDNER. Who owns these 2,000,000,000 tons?

Mr. COLE. A very large amount is held by people who are manufacturing steel in the United States, and large amounts are held by independent people.

Mr. GARDNER. Do you think it will be sold?

Mr. COLE. I think there will be a demand for the ore so that it can be sold in the United States at some time.

Mr. GARDNER. Do you believe that as much as 1,000,000,000 tons is held for the purpose of future sale?

Mr. COLE. Yes, sir; twice that amount, I should say.

The CHAIRMAN. Do you mean leased or owned in fee?

Mr. COLE. Owned in fee by independent people, who would like to sell to somebody who can make steel.

The CHAIRMAN. They are not engaged in the steel business themselves?

Mr. COLE. No, sir.

Mr. BARTLETT. Is that what you mean by independent people, people who are not engaged in the steel business themselves?

Mr. COLE. Yes, sir.

Mr. BARTLETT. You do not mean people outside of the Steel Corporation?

Mr. COLE. No; I mean ore people, pure and simple.

Mr. GARDNER. What I am getting at is, is 1,000,000,000 tons available for putting it into the steel business?

Mr. COLE. Yes, sir.

Mr. YOUNG. How far west, in your judgment, could that ore be introduced into the United States in competition with Lake Superior ores?

Mr. COLE. Well, in normal years I believe that the ores eventually go as far west as the Pittsburgh district, and, with the completion of the Erie Canal, it could be landed at ports on Lake Erie for the manufacture of iron and steel. Please remember that I say "in normal years."

Mr. YOUNG. Yes. Why do you use that term, Mr. Cole?

Mr. COLE. Well, I consider that we are passing through an abnormal period just now in the iron and steel business in this country. Prices are very much depressed, and are far too low to afford even a reasonable profit. Many of the independent concerns are trying their best to make a little money and can not. They are doing everything on earth to secure their raw material at a very low price, so low that we are seriously considering closing down a mine I am interested in up on the Marquette Range, because we can not afford to sell our ore to them at the figures they are offering. Therefore, this is not a year that is normal in the steel business.

Mr. YOUNG. Has that Cuban ore district been thoroughly explored yet, so that they are reasonably certain that there will be not any more ore discovered there?

Mr. COLE. No, sir; I believe that there will be considerable additional tonnages found when they get farther away from the coast, back into the interior. At the point where these ores exist the mountains rise up quite rapidly from the sea—the Moa Mountains—and the ore has been found to extend up to their crest and on some table-lands in the interior. A great deal of the material has been weathered and taken away, scoured out by the stream of waters as they have fallen on these mountains, and washed down into the sea; but I believe they will find additional tonnages, perhaps not large quantities, because I think the largest quantities have been found.

Mr. GARDNER. How about these other tropical islands, like Haiti and Jamaica?

Mr. COLE. I do not know of anyone investigating the mineralized areas of the islands you refer to, who have found any mineral other than copper.

Mr. YOUNG. They would probably know it if there was much ore in Jamaica, I suppose, would they not?

Mr. COLE. Well, possibly; but when you consider that these enormous beds of iron ore exist on the north coast of Cuba, and that 30 years ago the Spaniards, when guarding some of the trails crossing over these mountains, to reach the little village of Myari, used this material, cast it up for shelter and protection from attack, it was rated as having no commercial value until five or six years ago.

The CHAIRMAN. You mean it was known to be iron ore then?

Mr. COLE. Yes; they called it red earth, but they did not seem to realize its mineral value.

The CHAIRMAN. Did they know it was iron ore?

Mr. COLE. They could not mistake it. If you saw some of those places, Mr. Chairman, you would imagine you were transported up to the Mesabi Range, and were looking at some pine trees up on the rim of the bed of iron ore.

Mr. GARDNER. But, is there, as a matter of fact, any evidence that they did know it?

Mr. COLE. They knew what it was, but they did not seem to realize its commercial value in the least, and only within the last four or five years has attention been paid to it. Therefore, I should say it would not be strange at all if in all of these large islands down in the Caribbean Sea such deposits might have been overlooked. They had iron-ore miners in Cuba all of these years, too.

Mr. GARDINER. Yes; there were some travelers in Cuba in 1840 that referred to the iron deposits, but I was wondering in this particular instance you speak of, whether they knew they were throwing up their breastworks out of iron ore.

Mr. COLE. Well, it resembles iron ore.

Mr. GARDNER. Sure, but perhaps not to a man not a metallurgist.

Mr. COLE. Well, the Spaniards knew iron ore, but they did not realize its great commerical importance.

The CHAIRMAN. As I understand you, you mean to say that any man who ever knows iron ore once will know it the next time he sees it?

Mr. COLE. That is right.

The CHAIRMAN. It does not really require a man to be a chemist to know that it is iron ore?

Mr. COLE. No, sir.

Mr. YOUNG. Have you any knowledge about these Brazillian deposits?

Mr. COLE. Only through reports of engineers that I sent to Brazil to examine these deposits.

Mr. YOUNG. If you can remember, what did you learn from those reports?

Mr. COLE. The ores were of an exceedingly high grade, and in very large quantities. The water content is very low, and the iron is very high, and in a very large amount of it the phosphorus element is very low.

Mr. YOUNG. What do you mean by very large quantities?

Mr. COLE. Judging from the development work that has been done there, with drilling and prospecting and visible ore in sight, I think we would not be overestimating in saying that there is at least 1,500,000 tons to 2,000,000,000 tons of ore there.

Mr. YOUNG. Where is this ore in Brazil?

Mr. COLE. It is inland.

Mr. YOUNG. How far?

Mr. COLE. A distance of 150 to 160 miles. They are now building a railroad from the seaboard to Victoria, following a water course, a river, up into the interior. The headwaters of the stream rise up where these ore bodies exist, so that they should have fairly good grades from the mines down to the seacoast, just as in the Lake Superior district they have fairly good grades from their deposits down to the Lake ports.

Mr. YOUNG. Have those ores been picked up to any extent by steel men?

Mr. COLE. I am told that Englishmen interested in iron and steel manufacturing have secured a quite considerable tonnage there. I am told that there are large quantities that could be secured from the Brazilian Government, and that there are large quantities now secured by a group of men who are interested in iron and ore matters in this country, and no doubt large additional tonnages could be found and developed in a district as important as that one is.

Mr. BARTLETT. Is there coal down there?

Mr. COLE. I do not know of any.

The CHAIRMAN. Is there any coal in Cuba?

Mr. COLE. Cuba, if they wanted to reduce their ores in the island, would have to secure their coal from the United States. There has been some talk of trying to smelt the ores down there with electricity, generating it from the enormous water powers in the interior. That was brought about by the fact that they did not have any coking coal available.

Mr. BARTLETT. As to these Brazilian ores that you speak of, does the Government own the land?

Mr. COLE. Some of the land is still Government land, as I understand it.

Mr. BARTLETT. Were they originally owned by the Government?

Mr. COLE. Yes, sir.

Mr. BARTLETT. They are Government lands?

Mr. COLE. Yes, sir.

Mr. BARTLETT. Have they an export tax on iron ore?

Mr. COLE. I can not tell you that. I imagine nearly all of these Latin countries have an export tax, and I imagine they are charging something for each ton of iron ore that may be shipped away from that country. The present railroad serving the district is not well constructed or equipped to handle large tonnages of this ore——

Mr. BARTLETT. Is it a Government road?

Mr. COLE (continuing). For it passes over mountain ranges.

Mr. BARTLETT. Was that road built or is it controlled by the Government?

Mr. COLE. I can not tell you who owns that road.

Mr. BARTLETT. It is 150 miles from the port, is it?

Mr. COLE. It is 150 miles fully from the ore deposit to the sea, the nearest point where that can be shipped. The road that is being constructed following this river from Victoria will be the ore handling road of that district.

Mr. BARTLETT. Is it an expensive road to build in that region?

Mr. COLE. Well, it would be fairly expensive to build.

Mr. BARTLETT. There was one question I wanted to ask you when you spoke about normal years, when there would be a demand for this Cuban ore in this country.

Mr. COLE. Yes, sir.

Mr. BARTLETT. You say this is an abnormal time or year.

Mr. COLE. Yes, sir. Prices are exceedingly low this year.

Mr. BARTLETT. Business has improved very much in the last six months, has it not?

Mr. COLE. I hope it will improve.

Mr. BARTLETT. I find this statement in the Wall Street news in the paper this morning:

> A general advance in the prices of the iron and steel products is expected to occur within a short time by those who watch the trade closely. The advance in sheet steel prices by the jobbers and the mills is taken to be the forerunner of the movement. Orders booked by the United States Steel Corporation are coming in at the rate of 40,000 tons a day and better, the railroads having developed a new buying "streak." There is likewise a considerable demand from the car-building companies, due to their greatly increased business. Heavy rail orders are under consideration by several of the larger railroad systems. Purchases of equipment have already been large and there is a good prospect of their continuing, as last year in the effort to economize the railroads used their outworn equipment to the very last ounce of availability.

That will indicate that you are getting back to normal conditions.

Mr. COLE. I hope so. I hope that that information is true. Blast furnace companies usually buy their ore long before this period of the year, and they have been buying ores in the Cleveland market for some time past. They tried to buy the ores we produce, some time ago, and we refused to sell, because the offer would not allow us to pay the wages we are now paying our workmen up there and come out even.

Mr. YOUNG. When you say in relation to this business, you mean the mines you are personally interested in?

Mr. COLE. Yes; the mines I am personally interested in.

Mr. YOUNG. You have no connection now with the Steel Corporation?

Mr. COLE. No; nor with any steel corporation. We are miners of iron ore.

The CHAIRMAN. How far is it from the Brazilian port to the American port where this haul would come to?

Mr. COLE. It is a long distance, and the ocean rate is pretty high; but, on the other hand, the grade of ore is very high.

The CHAIRMAN. Is it Bessemer or non-Bessemer?

Mr. COLE. A large proportion of it is high-grade Bessemer ore, very high in iron and low in phosphorus, while in other districts they have tonnages of non-Bessemer ore as well, Mr. Chairman.

Mr. YOUNG. Have you any knowledge in regard to the Utah ore situation?

Mr. COLE. Only through the report of the engineers.

Mr. YOUNG. Engineers that you sent out to look it over?

Mr. COLE. Yes, sir.

Mr. YOUNG. What can you say as to those deposits from the information you received from your engineers?

Mr. COLE. There are very large tonnages of ore in Southwestern Utah—in Iron County, Utah.

Mr. YOUNG. Where could that ore be smelted?

Mr. COLE. I do not know of any place in the West at the present time where it would be profitable to erect blast furnaces to manufacture that into iron or steel products, because of the fact that Salt Lake City, like Galveston and New Orleans, is not at this time a distributing point for large quantities of steel or iron products.

Mr. YOUNG. Yes.

Mr. COLE (continuing). But when the time comes that Salt Lake City can distribute large quantities of that material, I see no reason why the ores can not be sent up to the valley of the great Salt Lake, and there meet the coking coal from Wyoming and from Utah mines and be reduced into iron metal, made into manufactured shapes, and sold.

Mr. YOUNG. How long would the haul be up to Salt Lake?

Mr. COLE. Approximately 160 miles from the mines to Salt Lake Valley.

Mr. YOUNG. Is that a country through which a road can be built with good grades?

Mr. COLE. A railroad is already operating through there, the Oregon Short Line. That is a railroad constructed from well down toward the mine, and that afterwards became a part of the San Pedro, Los Angeles & Salt Lake Railroad, commonly known as the Clark road, owned by Senator Clark.

Mr. YOUNG. Are the grades fairly good?

Mr. COLE. I am unable to tell you, because I assume that Salt Lake is lower than the point where this ore deposit exists. They might have some adverse grades in between, but no physical difficulty why this ore should not be mined and moved over there into Salt Lake Valley at a reasonable cost.

Mr. YOUNG. The real difficulty about it at the present time, then, that the country which could be economically served from Salt Lake does not demand enough iron and steel to justify the erection of a plant?

Mr. COLE. That is it exactly, Mr. Young, just as the city of Duluth, up to the present time, did not distribute sufficient quantities of iron and steel products to justify the building of an extensive plant there; but the time has now come when the distribution of that class of materials from that point does justify the erection of a steel plant there and one is being built. Chicago has had to have its manufacturing facilities largely increased during the past ten years, on account of the fact that it has become such an important distributor of manufactured iron and steel products. Duluth is now coming into its own, and the day will come when Salt Lake will be an important center for the moving of iron and steel. At the present time, all of that territory is supplied by the Colorado Fuel & Iron Co., except what other concerns in the East can sell out in that territory

The CHAIRMAN. Mr. Young, I would like to ask Mr. Sellwood a question or two, and if you have no objections will put him on now

Mr. YOUNG. Very well.

The CHAIRMAN. With your permission, Mr. Cole, I will put Mr. Sellwood on now, as he wants to get away.

Mr. COLE. Yes, sir.

FURTHER STATEMENT OF MR. JOSEPH SELLWOOD.

The CHAIRMAN. Mr. Sellwood, on yesterday I neglected to ask you a question or two, and I would like to do so now. About two years ago I believe you had up the question of value of ores in the ground before the Tax Commission of Minnesota, had you not?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. And some litigation?

Mr. SELLWOOD. I do not remember of any litigation.

The CHAIRMAN. In the district courts. Did you not have that question up as to the value of these iron ores in the ground?

Mr. SELLWOOD. Before the tax commission.

The CHAIRMAN. Was it before the tax commission?

Mr. SELLWOOD. I think so.

The CHAIRMAN. You testified in that case, did you not, Mr. Sellwood.

Mr. SELLWOOD. I think I did.

The CHAIRMAN. Do you remember what valuation you placed upon the ore in the ground at that time, on the Bessemer and non-Bessemer ore?

Mr. SELLWOOD. I do not remember, Mr. Stanley, what I testified to at that time. It is worth more now than it was then.

The CHAIRMAN. Yes, I know; but I want it at that time, not for the purpose of contradiction at all.

Mr. SELLWOOD. I understand.

The CHAIRMAN. I will refresh your memory and ask you if you did not place the value of the ore in the ground, before it is stripped or anything of that sort, at from 4 to 5 cents?

Mr. SELLWOOD. I think I did; now that I come to think of it, it was before the court in Duluth.

The CHAIRMAN. Yes.

Mr. SELLWOOD. It has been a good many years ago.

Mr. GARDNER. What year was that?

Mr. SELLWOOD. I would say that was fully 10 or 12 years ago. It was at the time we changed from the tonnage tax to a real estate valuation. There was a time in Minnesota when we paid a cent a ton tax in lieu of all taxation on the mines. I think that must have been about 1895 or 1896. I am not positive of the time.

The CHAIRMAN. Was that for Bessemer or for non-Bessemer ore?

Mr. SELLWOOD. Well, there were different prices, Mr. Stanley, because the Bessemer——

The CHAIRMAN. What I would like to know is was that valuation placed upon the Bessemer or non-Bessemer, the 4 or 5 cents?

Mr. SELLWOOD. Well, that was placed on the Bessemer, and the non-Bessemer was less.

Mr. GARDNER. That was the fee value?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Do you know what year that was in?

Mr. SELLWOOD. It was fully 10 or 12 years ago.

The CHAIRMAN. It was mentioned to me by a gentleman that this question of the valuation of the ore was discussed.

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. And you were one of the witnesses in the cases, which he said took place several years ago?

Mr. SELLWOOD. Yes; several years ago. It was brought about on the ground that many of the tax payers refused to pay taxes on the ground that the mines were not properly assessed. Mr. Leon Merritt was on the stand ahead of me, and he placed it at 25 cents a ton in the ground, when there was not a lease in Minnesota at that time that paid over 25 cents a ton as they took it out.

The CHAIRMAN. Up until the time of the Hill lease—when was that, 1906 or 1907?

Mr. GARDNER. 1907, was it not?

Mr. REED. August, 1907.

The CHAIRMAN. Up until the time of the Hill ore lease, do you know of any ore of 55 or 60 per cent iron content, undeveloped, that leased for more than, say, 15 cents a ton?

Mr. SELLWOOD. Oh, yes; a great deal of it. I do not know of any property which was leased as low as 15 cents.

The CHAIRMAN. To go back prior to the time of the formation of the Steel Corporation and the holding of large bodies of ore, do you know what ores sold for per ton?

Mr. REED. In the ground, do you mean?

Mr. SELLWOOD. In the market?

The CHAIRMAN. Either on royalty or in fee, in the ground. I am talking about in the ground altogether.

Mr. SELLWOOD. I know what they were leased for, Mr. Stanley. I said I only knew of one that leased at 15 cents a ton, and in that statement I am correct; but the Mahoning Mine was leased at 25 cents a ton, and in case they shipped 1,000,000 tons they were to reduce it to 15 cents.

The CHAIRMAN. A State lease?

Mr. SELLWOOD. Twenty-five cents.

The CHAIRMAN. Suppose you would own a State leased body, and wanted to turn it over to me, would I not have to give a bonus on it?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. How much would the bonus amount to?

Mr. SELLWOOD. I remember one, known as the Scranton Mine——

The CHAIRMAN. Give the year first.

Mr. SELLWOOD. 1905.

The CHAIRMAN. Is the Scranton Mine a State mine?

Mr. SELLWOOD. A State mine.

The CHAIRMAN. It was leased to some party on a 25-cent lease?

Mr. SELLWOOD. Yes.

The CHAIRMAN. And that party alienated it in some year prior to 1905?

Mr. SELLWOOD. They sold it to the Lackawanna Steel Co., the lease, for $350,000.

The CHAIRMAN. How much did that figure, at $350,000, in cents per ton?

Mr. SELLWOOD. It was estimated at that time they had 8,000,000 tons there. It is a question of figuring that out.

Mr. YOUNG. What year was that?

Mr. SELLWOOD. 1905.

Mr. GARDNER. That would be rather a complicated thing to work out, because, in one case you are paying 25 cents a ton for a deferred payment, and in the other case, you are getting actual cash at so much per ton.

Mr. SELLWOOD. Yes; 25 cents a ton.

Mr. GARDNER. Was that a good sample illustration of the value of a lease in 1905?

Mr. SELLWOOD. It was.

Mr. GARDNER. I should think that would give us a basis for working out a very good valuation.

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. I see, Mr. Sellwood, that in that year the Mesabi Bessemer sold at $3.50. That was the price?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. Was this Bessemer ore or non-Bessemer?

Mr. SELLWOOD. It was partly Bessemer and partly non-Bessemer. I should say about half and half.

Mr. YOUNG. And the non-Bessemer sold at $3. That would make an average price of $3.25.

Mr. SELLWOOD. Are you giving us the Mesabi price, Mr. Young?

Mr. YOUNG. No; I am giving you the Cleveland, Lake Erie port, price of the ore.

Mr. SELLWOOD. Yes, the old range ore or Mesabi.

Mr. YOUNG. I am giving you the Mesabi.

Mr. SELLWOOD. That is right.

Mr. YOUNG. Mesabi Bessemer, $3.50.

Mr. SELLWOOD. Yes.

Mr. YOUNG. Mesabi non-Bessemer, $3.

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. How much profit ought there to have been in ore in that year, in selling it?

Mr. SELLWOOD. What is that?

Mr. YOUNG. How much profit ought there to have been in mining and selling that ore at that price, which would be an average of $3.25 to Lake ports, in that year?

Mr. SELLWOOD. Well, the mining, underground, would cost you about $1; your rail freight was 80 cents, and your Lake freight at that time was 75 cents. Then there is your royalty, whatever it is, and there is a commission of 10 cents a ton for selling ore and about 5 cents insurance.

Mr. YOUNG. That would make about $2.85 cost, aside from your taxes, whatever they were?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. That would leave a profit of about 40 cents a ton.

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. And there is something I have never been quite able to understand, Mr. Sellwood, as to why there has always been such a great difference between the value of this ore in the ground and the value at Lake Erie ports, after taking out the cost, that is, when you can make 40 cents a ton on ore that you could get for 5 or 6 cents.

Mr. SELLWOOD. Well, Mr. Young, if you buy a deposit of ore, say, 50,000,000 tons, at 10 cents a ton, it runs into a good deal of money.

Mr. YOUNG. Yes.

Mr. SELLWOOD. And the interest on that would be equal to the royalty.

Mr. YOUNG. Yes; but if you get it on a royalty basis, of course you do not pay except as you take it out.

Mr. SELLWOOD. That is right. That is the reason I would rather pay 50 cents a ton on a royalty basis than 10 cents a ton for a mixed deposit of ore in the ground. The interest eats you up.

Mr. YOUNG. Now, in the case you mentioned, there was 25 cents royalty?

Mr. SELLWOOD. Yes, sir; State lease.

Mr. YOUNG. $350,000 paid for a bonus on about——

Mr. SELLWOOD. About 8,000,000 tons.

Mr. YOUNG. Well, to be liberal, say it was $400,000. That would be 5 cents a ton.

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. In other words, you could get that ore in the ground for a royalty of about 30 cents?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. And there would be a profit on the operation of about 40 cents?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. According to these figures here.

Mr. SELLWOOD. Yes; but you have some years there where you would get a good deal less per ton.

Mr. YOUNG. But since that time they have generally been more?

Mr. SELLWOOD. Well, but some years.

Mr. YOUNG. The next year you got $4, the next year $4.75, and the next year $4.25.

Mr. SELLWOOD. You are figuring on the Bessemer ore?

Mr. YOUNG. Yes.

Mr. SELLWOOD. Well, take non-Bessemer.

Mr. YOUNG. Very well. I will take the next year on non-Bessemer. You got $3.50, the next year $4, the next year $3.50, the next year $3.50, the next year $4, and the next year $3.50, which was 1911.

Mr. SELLWOOD. $3.50 in 1911.

Mr. YOUNG. Yes. Now you get $2.85.

Mr. SELLWOOD. Take the year 1904, please.

Mr. YOUNG. That was before this.

Mr. SELLWOOD. Yes, I know; but let us see what it was then.

Mr. YOUNG. In 1904 it was $3 on Bessemer and $2.50 on non-Bessemer.

Mr. SELLWOOD. That is right. It varied.

Mr. YOUNG. That is the lowest price quoted since 1893.

Mr. SELLWOOD. Yes.

Mr. GARDNER. I want to give you for your information, if you care to have it, that in 1905 I sold a 36-cent lease of property that had about 8,000,000 tons to Jones & Laughlin at $2,000,000.

Mr. GARDNER. You sold the lease of the properties?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. That is, you transferred the lease to Jones & Laughlin?

Mr. SELLWOOD. Yes, sir; but we had spent about $250,000——

Mr. GARDNER. How many million tons of that ore did you say?

Mr. SELLWOOD. About 8,000,000.

Mr. GARDNER. That is 25 cents a ton bonus?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. What year was that?

Mr. SELLWOOD. 1905.

Mr. GARDNER. That was an exceptional body of ore?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Very easy to develop?

Mr. SELLWOOD. Yes, sir. It was all stripped, and it could be all mined with a steam shovel. It was all Bessemer ore and it was worth fifty or sixty cents a ton more in the market than non-Bessemer.

Mr. GARDNER. That is an extreme valuation, is it?

Mr. SELLWOOD. Sir?

Mr. GARDNER. That is an illustration of an extremely valuable piece of ore?

Mr. SELLWOOD. Yes, sir. I think it is the best sale that was ever made on the range.

Mr. GARDNER. I do not mean from the point of view of profit, but from the point of view of an ore deposit. It was an extremely valuable ore deposit.

Mr. SELLWOOD. It was.

Mr. GARDNER. Did you give the year of that?

Mr. SELLWOOD. 1905.

The CHAIRMAN. I notice in the report of Herbert Knox Smith, page 28, that he says:

> The following significant statement from a formal brief filed by the delegation from St. Louis County in the House of Representatives of Minnesota (the great bulk of the developed iron-ore deposits of Minnesota being in St. Louis County), as late as 1909, may be cited:
>
> "The cheapest sales of fee ore we ever knew was for less than 1 cent per ton; the highest that we ever knew was for 15 cents per ton. There may have been sales at a higher price, but we have never known of one, and upon inquiry can learn of none."

Mr. REED. Evidently, he has not inquired of Mr. Sellwood.

The CHAIRMAN. Mr. Sellwood, do you know of any fee ore that was sold, prior to 1909, say, for a price in excess of 15 cents a ton?

Mr. SELLWOOD. No, sir.

The CHAIRMAN. That is still a good price for fee ore?

Mr. SELLWOOD. It is.

Mr. YOUNG. But you got 25 cents a ton cash for a lease.

Mr. SELLWOOD. I got notes from the company. I did not get any cash, but those notes drew interest.

Mr. YOUNG. The same thing.

Mr. SELLWOOD. Yes.

Mr. YOUNG. You got 36 cents.

Mr. SELLWOOD. Yes; but that was an unusual deposit.

Mr. YOUNG. How is that?

Mr. SELLWOOD. It was an unusual deposit; and I stated here yesterday, I think, that I offered Mr. Hill $1 a ton royalty on a property. That property adjoined this one.

Mr. GARDNER. Have you any ore lands for sale?

Mr. SELLWOOD. No.

Mr. GARDNER. What would you expect to have to pay for good fee ore lands to-day if you were willing to buy them? You said it is not your policy to buy fee ore; you would rather buy royalty.

Mr. SELLWOOD. Yes.

Mr. GARDNER. But if you can put yourself in the mental position of one who wanted to buy fee ore, what would you expect to have to pay for it to-day?

Mr. SELLWOOD. I can not say what I would have to pay, but I would not pay over 40 cents a ton cash for anything that I know of.

Mr. GARDNER. Well, do you think there is anybody else who would?

Mr. SELLWOOD. I hardly think so.

Mr. GARDNER. You hardly think so?

Mr. SELLWOOD. That is, a large deposit of ore.

Mr. GARDNER. You are speaking of 55 per cent metallic content, Lake Superior ore?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Bessemer ore.

Mr. SELLWOOD. And 55 per cent on your Bessemer, and 51½ on your non-Bessemer.

Mr. GARDNER. Speaking of the 55 per cent Bessemer ore from the Lake Superior region, with the way you mine, and with conditions of favorable uniformity, you think it would be hard to find any man who would pay over 40 cents a ton?

Mr. SELLWOOD. No; when all conditions were favorable you could get more than that. You could get 50 cents.

Mr. GARDNER. Then, with the conditions favorable, it would be difficult to have a man pay you over 50 cents?

Mr. SELLWOOD. I think so.

Mr. GARDNER. That is, to-day.

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. In 1912.

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. I would like to ask Mr. Cole, or have some other gentleman ask him, when he comes on, to comment on that statement.

The CHAIRMAN. I did not catch the answer.

Mr. GARDNER. The question was asked him as to what he thought fee ore was worth to-day under exceptionally favorable circumstances, and he said 50 cents. Under other circumstances I think you indicated it would be difficult to find a man to pay 40 cents?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. Suppose it were non-Bessemer ore, would it be 25 cents less?

Mr. SELLWOOD. No, sir; about 10 or 15 cents.

The CHAIRMAN. What percentage of the Mesabi ore is non-Bessemer?

Mr. SELLWOOD. About 20 or 25 per cent is non-Bessemer.

Now, Mr. Gardner, may I go a little further?

Mr. GARDNER. I would be glad to have you volunteer your evidence.

Mr. SELLWOOD. I will be glad to do it.

The CHAIRMAN. You may make any statement you like.

Mr. SELLWOOD. You take a deposit of ore that has 100,000,000 tons in it, and you pay 50 cents a ton; it costs you how much? Fifty million dollars, does it not? Now, you take your interest on $50,000,000, and we figure 6 per cent; that would be $3,000,000 a year.

Mr. GARDNER. Compounded semiannually.

Mr. SELLWOOD. Yes, sir. On a shipment of 1,000,000 tons a year your interest would cost you equal to $3 a ton, and that is about all you can get for it in the market to-day.

The CHAIRMAN. Do you think it wise policy, Mr. Sellwood, for a company to invest $700,000,000 or $800,000,000 in a dead property in that way, when they could have bought that ore in the open market and have saved that enormous loss that they would have to make up out of the profit of their manufacturing business?

Mr. SELLWOOD. I do not quite understand the first part of your question.

The CHAIRMAN. Do you think it is a wise policy for a corporation, if it is not a wise policy for an individual, to invest $700,000,000 or $800,000,000 into a dead property if they could by any possibility have gone and satisfied their needs in the open market?

Mr. SELLWOOD. No, sir.

Mr. REED. Do you mean $700,000,000 or $800,000,000 or $7,000,000 or $8,000,000?

The CHAIRMAN. Either one; I do not care which.

Mr. SELLWOOD. There is a good deal of difference between those figures.

The CHAIRMAN. Let us take $700,000,000 or $800,000,000.

Mr. SELLWOOD. Not if they could get hold of the lease and pay 50 cents a ton royalty for it.

The CHAIRMAN. Up until the time the Oliver people went in that region, as well as other companies, and one company began to bid against the other for these ores, until the various manufacturing companies became uneasy for fear that one concern would get all the ores and compel them to buy from some ore company which might agree on a price, did anybody have any difficulty in getting all the ore they wanted to load at 5 or 10 cents?

Mr. SELLWOOD. No; you could not get it at 5 or 10 cents. Most of those properties were taken up by poor men, who explored it.

They could get a 25-cent lease, and would still have 5 or 10 cents additional royalty.

The CHAIRMAN. Well, take the Mahoning lease. There was a 50-year lease, was it not?

Mr. SELLWOOD. I think it was.

Mr. GARDNER. Is it not pretty fair in estimating this business to take the State leases of the State of Minnesota? That lease law was gotten through by Mr. Merritt. He had a good deal to do with it, as did also Gov. Merriam, of Minnesota.

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Is it not a fair assumption that when the State fixed 25 cents a ton as the price of the lease that that was a fair estimate of the lease value at the time they gave it?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. I think that would be a fair valuation now, but what I am trying to get at is this: I can not find in any record a lease of that kind, even by the State, although I am not up on the proposition, prior to the time that the Oliver people began to acquire these large properties.

Mr. GARDNER. I think you are wrong about that.

Mr. SELLWOOD. Some of the first leases made were leases by the State.

Mr. YOUNG. The Oliver Co. did not make the first large assemblage of ore.

Mr. SELLWOOD. No.

The CHAIRMAN. I did not refer to the Oliver Mining Co. I am referring to the first large holdings of ore by an industrial concern, and they were secured by Mr. Oliver in that region for the Carnegie Co.; is that correct?

Mr. SELLWOOD. Yes; he got them mostly from Merritt and other gentlemen.

The CHAIRMAN. This is just an impression, but my impression is that the first industrial concern that acquired any large amount of holdings, the first man who conceived the idea of having an industrial concern acquire large bodies, was Mr. Oliver.

Mr. SELLWOOD. That is quite true, Mr. Stanley. The Minnesota Iron Co. were operating on the Vermilion Range, and they got the first lease, after the Merritts got the State lease. Then Oliver came in.

The CHAIRMAN. But the ore in the Vermilion Range was not a large body of ore.

Mr. SELLWOOD. No, sir.

The CHAIRMAN. I am speaking of a body of ore over one hundred million tons, and my impression was that Mr. Oliver was the first man that got a large holding for an industrial concern in the Mesabi Range.

Mr. GARDNER. The Chairman's point is this: What he wants to know, if I understand him correctly, is, what leases were had before this artificial competition began of large steel corporations, each one, in a freightened way, grabbing for ore reserves.

Mr. SELLWOOD. The first lease——

Mr. GARDNER. And I suggest that, inasmuch as the State of Minnesota had adopted a system of leasing lands, as I understand it, in 1893 or 1894, before this competition began, the value which the

State put upon those leases, and was able to get for those leases, provided there was no bonus or transfer of those leases, is a fair indication of the situation before the competition began for gathering in the ore bodies.

The CHAIRMAN. If that is the case, I shall agree with you.

Mr. SELLWOOD. All of those leases were made by the State at 25 cents a ton and no bonuses.

The CHAIRMAN. Was that prior to the time that the Olivers and the Minnesota Iron Co. and the Rockefellers acquired large ore holdings, that the State of Minnesota fixed that amount at 25 cents a ton?

Mr. SELLWOOD. Yes; it was prior to that.

The CHAIRMAN. Well, I agree with you.

Mr. SELLWOOD. But there were a great many State leases made after the Minnesota Iron Co. and the Oliver Iron Mining Co. went in there. However, the first lease was made there to the Merritts. There was an attorney general there, I forget his name, and he worked with Senator Clapp, who has succeeded him as attorney general, he being also interested with the Merritts in building that railroad and taking those leases. They were the first leases that were issued; but there were a great many State leases made years after all those were made.

Mr. BARTLETT. But that is not the point. The point is, had the State adopted the policy of leasing ore at 25 cents before this?

Mr. SELLWOOD. I could answer that question by saying yes.

The CHAIRMAN. Now, if the steel companies of this country had followed the policy originally adopted by Mr. Carnegie, of keeping their capital in manufacturing and going on the market and buying their ore, just as a miller goes on the market and buys his wheat, do you believe that those ores to-day would be leasing for 25 cents a ton?

Mr. SELLWOOD. Yes, sir. They have been glad for the last ten years to take State leases and pay anywhere from 10 to 15 cents additional.

The CHAIRMAN. But I understand that most of those mines are not on the market. For instance, the Steel Corporation now has from 500,000,000 to 750,000,000 tons.

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. And they will not sell you any?

Mr. SELLWOOD. No, sir.

The CHAIRMAN. And the Cambria Company is not selling you any?

Mr. SELLWOOD. No, sir.

The CHAIRMAN. Would it be a good policy for any concern making iron at a profit, with the prospect of the exhaustion of that ore in forty years, to decrease the price of ore, and in that way encourage other people to go into the iron manufacturing business?

Mr. SELLWOOD. I would not say so.

The CHAIRMAN. Then, the prices that are paid now, as I see it, are no evidence of what the prices would be were that the policy among the manufacturing concerns, both steel corporations and others; is not that true?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. Now, what I am trying to get at is, if these concerns have never gotten this ore, if these ores were now held by men like yourself in the ore selling business, and one man had 250,000,000 tons, and somebody else had 250,000,000 tons, and another man had 300,000,000 tons, and so on, and there were fifty different concerns in the region, each having ore for sale, do you think you would have this enormous increase in the value of ore leases?

Mr. SELLWOOD. I think so; but there is one question that I do not believe is thoroughly understood, and that is that all the ore was not found at once. They have been finding ore right along, up to the last two or three years.

The CHAIRMAN. That would tend to decrease, rather than increase, the price, would it not?

Mr. SELLWOOD. Well, yes.

The CHAIRMAN. If, for instance, the Steel Corporation should determine to increase its holdings, if possible, four or five hundred million tons, and would appropriate two or three million dollars or twenty million dollars for the purpose of exploring it in the Marquette and Menomenee regions, or wherever there was any indication of it, until they got beyond the region where ore could be expected, and they should drill all over the Superior district until they could determine, as it could be determined, that there was no more ore there, would not that have the effect of vastly increasing the value of the ore then visible?

Mr. SELLWOOD. Yes; but you could not do it that way. As an independent operator within the last three or four years, I have leased two properties, one for 85 cents a ton, with a minimum royalty of 100,000 tons a year, of Bessemer ore, and I have taken another mine of non-Bessemer ore, at 75 cents. There are several furnace men who do not have any ore at all. We buy those properties and mine and sell them the ore. All of the ore is not held by the manufacturers by a good deal.

The CHAIRMAN. Well, I know that, but there is some ore in the region that is now on the market, just like corn or cabbage or anything else.

Mr. SELLWOOD. I bought a property three years ago that was explored about ten years ago, and they have always held it at 75 cents, and nobody would pay it; but I took it three years ago.

Mr. GARDNER. Mr. Sellwood, if these Lake Superior ore mines were owned by a hundred different mines, and they were all competing to lease their mines on a royalty to miners—do you get the proposition?

Mr. SELLWOOD. So far.

Mr. GARDNER (continuing). Do you think the leased value of those mines you have spoken of, the royalty lease value of 85 cents, would be 85 cents and 75 cents?

Mr. SELLWOOD. Not all of them.

Mr. GARDNER. Well, the ones you have leased for 85 cents.

Mr. SELLWOOD. Yes, sir; because, at the time I got them, I could mine the ore, pay the freight, pay a royalty, and make a little money out of it.

Mr. GARDNER. On account of the price of the ore?

Mr. SELLWOOD. On account of the price of the ore.

Mr. GARDNER. On account of the price of the ore being so high.

Mr. SELLWOOD. We are just as low now. We are selling that non-Bessemer ore this year at $2.85, and pay 75 cents royalty.

Mr. YOUNG. It seems to me there was something that was overlooked by everybody, Mr. Sellwood, but I would like to hear what you were going to say.

Mr. SELLWOOD. I took an illustration just now. You paid 50 cents a ton for 100,000,000 tons of ore, and the interest on that would be about $3,000,000. Now, you have got to get back your $50,000,000 that you paid, in order to be even. That is 50 cents a ton more, and it would cost you $3.50 on a million tons shipped, to say nothing about the mining cost or freight; so that I say the 50 cents is a big price to pay for ore. Under the lease I speak of, I only had to pay a royalty as I took the ore out. There was no money involved, and no interest account.

The CHAIRMAN. If there is no minimum, you can afford to agree to pay almost any royalty and trust to the market.

Mr. SELLWOOD. I think 50,000 tons on one and 100,000 on the other. I can sell at those prices and get out about even, because we have a 20 per cent reduction in the freight this year.

Mr. YOUNG. Now, I hold in my hand No. 52 of our hearings. On page 3483 begins an article entitled "Iron ore, pig iron, and steel, by Ernest F. Burchard." At page 3497 there is a report of the Geological Survey, and a part of that article shows a table of "Production of Lake Superior iron ore, 1854–1910, by ranges, in long tons." In 1903, the year about which we have been talking, I find that the entire production of the Lake Superior region was 6,594,620 tons.

Mr. SELLWOOD. I would like to ask you, Mr. Young, if the first year's shipment of the Mesabi is in that.

Mr. YOUNG. 29,245 tons.

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. That was two or three years before that.

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. Now, in 1910, the total shipments from that region were 46,328,743 tons.

Mr. SELLWOOD. From the Lake Superior district?

Mr. YOUNG. From the Lake Superior district. These are not shipments; these are productions. That includes, of course, the ore used.

Mr. SELLWOOD. This is production; not shipment.

Mr. YOUNG. No; not shipments. I am giving you production.

Mr. SELLWOOD. That is right.

Mr. YOUNG. Do you think that the increase in production in those years from 6,594,000 tons to 46,000,000 tons would have any tendency at all to increase the value of the ore?

Mr. SELLWOOD. No; because they shipped altogether too much in that year.

Mr. YOUNG. No; but when the demand in these years had increased so that, instead of taking 6,000,000 tons, they took 46,000,000 tons——

Mr. SELLWOOD. Now, I understand your question.

Mr. YOUNG. And you are getting your reserves out in the meantime.

Mr. SELLWOOD. Yes.

Mr. YOUNG. So that you know something about what there is. Do you think that would have any tendency to raise the price?

Mr. SELLWOOD. It did.

Mr. YOUNG. Do you think it would have done that whether these ores had been in a number of hands? Do you think it would have the same tendency?

Mr. SELLWOOD. Yes, sir. In 1911, you come down to 30,000,000 tons, and the price was 50 cents a ton less on all grades of ore. For

1912, I estimate that the shipments will be no larger than for last year, and our price is about 60 to 65 cents less than it was last year; so that the price of ore for 1912 is from $1.10 to $1.15 less than it was in 1910.

Mr. YOUNG. Now, here is another thing. I find that the average price of old range Bessemer—I take these because I can carry them back——

Mr. SELLWOOD. Yes.

Mr. YOUNG. The average price of old range Bessemer for the 10 years ending 1910, which embraces the 10 years of the Steel Corporation at the Lake Erie ports, was $4.23. That is an average for 10 years.

Mr. SELLWOOD. Bessemer ore?

Mr. YOUNG. Bessemer ore.

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. From the old ranges?

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. For the 10 years previous the average price of those ores was $3.63 at the Lake Erie ports.

Mr. SELLWOOD. Yes, sir.

Mr. YOUNG. And for the 10 years previous to that the average price was $6.08 per ton.

Mr. SELLWOOD. Yes. Well, the reduction in the 10 years prior came in when the Mesabi Range came in, and the panic——

Mr. YOUNG. Yes.

Mr. SELLWOOD. That showed up more and more on the Mesabi Range than the whole Lake Superior district, and there was no market for it all.

Mr. YOUNG. Now, this average increase in the last 10 years above the 10 years previous to that was from $3.63 to $4.23, and is accounted for by changed business conditions and increased demand, or do you think we must look to the organization of the steel company and the concentration of ores in a few hands to account for that increase of 60 cents?

Mr. SELLWOOD. No; I do not think so.

Mr. GARDNER. Let me put the question in another way.

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. Suppose you increase the demand for iron ore and you do not increase the amount of iron ore in the ground, is it not likely that the price of iron ore is going to go up?

Mr. SELLWOOD. Yes, sir.

Mr. GARDNER. But is it not possible that, although the price of iron ore has very naturally increased very much, it also has been artificially increased by the concentration of the ownership of those ore lands in a few hands?

Mr. SELLWOOD. I would not say that was so, Mr. Gardner.

Mr. GARDNER. That is what I wanted to get at.

Mr. SELLWOOD. No; I would not think so. Take it for 10 years prior to the organization of those people and you found a wonderful amount of ore; in 1903, in 1904, 1905, 1906 you had a panic and your prices were all low. Mr. Young will give you those prices.

Mr. YOUNG. $3.63 was the average for the 10 years of old range Bessemer.

Mr. SELLWOOD. Yes; but look at the drop it took in 1904, 1905, and 1906, the first three years that the Mesabi Range opened. They did not ship a ton of non-Bessemer.

Mr. REED. You mean 1893, do you not?

Mr. SELLWOOD. Yes.

The CHAIRMAN. Suppose 600,000,000 bushels of wheat were on the market and I go out and buy 300,000,000 bushels of that wheat and take it off the market, do you think that would affect the price of the other 300,000,000 bushels?

Mr. SELLWOOD. It certainly would.

The CHAIRMAN. In some years there are 2,000,000,000 bushels of corn raised in the United States. If I buy half of that corn and take it off the market, would not that affect the price of the other half?

Mr. SELLWOOD. Yes.

The CHAIRMAN. If there are 1,000,000,000 tons of ore or 500,000,000 tons of ore on the market in the hands of people who must sell it, because they can not use it for manufacturing purposes, they can not utilize it any more than they could utilize so much tobacco, and if I took half of that ore off the market would not the price on the balance follow the same law as we have on corn or any other commodity?

Mr. SELLWOOD. It is a different proposition entirely.

The CHAIRMAN. Wherein is it different from any other commodity offered for sale? How does it escape the law of supply and demand?

Mr. SELLWOOD. Nobody ships more ore than there is a market for, and pays $2 or $3 a ton for mining and freight.

The CHAIRMAN. I understand that thoroughly; but if there are 50 people with property to supply a given market and you reduce the number to 5 to supply that given market, don't you think that will affect the price?

Mr. SELLWOOD. Yes; but your price is governed entirely by the consumption of the ore. During the last two years the furnace men have not been running their furnaces, except the United States Steel Corporation.

The CHAIRMAN. Yes; but the price of wheat is governed in the same way. In prosperous times people eat more bread; they feed more cattle, and the price of corn goes up. Now, take a normal year, to-day; do you mean to say that if you should have 10 times as many people on the range to-day offering ore for sale as are offering it now it would not affect the price of the ore?

Mr. SELLWOOD. Yes, sir; it would.

The CHAIRMAN. That is what I wanted to know.

Mr. SELLWOOD. Yes, sir; it would.

The CHAIRMAN. Then the removal of large bodies of ore from the market, other things being equal, is bound to have an effect on the price?

Mr. SELLWOOD. Yes; but the price is so low now that you can hardly live.

Mr. REED. Will the chairman not take into consideration that the largest purchaser of ore has been removed at the same time?

Mr. YOUNG. Now, right along that line I want to ask you a question. Take the illustration given you by the chairman as to wheat. He said let us suppose that this great body of wheat had been taken out of the market. I will put it this way: Suppose that this wheat has been bought by millers who proceeded to make it into flour to supply the demand for flour; do you think that would have a tendency to increase the price of the remaining wheat?

Mr. SELLWOOD. No.

Mr. YOUNG. Is there any use for iron ore except to make steel and iron out of it?

Mr. SELLWOOD. Not that I know of.

Mr. YOUNG. Now, if the men who have purchased these large bodies of iron ore proceeded to supply the market with iron and steel, will that have any tendency to increase the price of the remaining ore?

Mr. SELLWOOD. No, sir.

Mr. YOUNG. When the market is supplied already with iron and steel?

Mr. SELLWOOD. No, sir.

Mr. YOUNG. Of course, if these men who bought this ore then shut down their plants and stopped making iron and steel, so that somebody else would go into the business, that would have a tendency to appreciate the price very greatly, would it not?

Mr. SELLWOOD. It would.

The CHAIRMAN. To carry his illustration still further: Suppose these men, these millers, should buy one year enough wheat to keep the mills running for 40 years, do you think that would have any effect upon the price of the wheat?

Mr. SELLWOOD. That is an extreme; that is a long time.

The CHAIRMAN. Well; taking that illustration, do you think that would have any effect upon the price of wheat?

Mr. SELLWOOD. If they locked it up?

The CHAIRMAN. Yes.

Mr. YOUNG. And did not manufacture it?

The CHAIRMAN. Manufactured one-fortieth of it.

Mr. YOUNG. Manufactured all the market needed?

The CHAIRMAN. Yes.

Mr. SELLWOOD. I think it would be hard for people outside to sell any more of it.

The CHAIRMAN. I have another question I was going to ask you after recess, Mr. Sellwood, but I think I had better ask it now.

In the years 1903 and 1904, what was the character and nationality of the laborers on the Mesabi Range?

Mr. SELLWOOD. They were Finns, Italians, and Austrians.

The CHAIRMAN. Principally what?

Mr. SELLWOOD. Austrians, I would say.

The CHAIRMAN. What percentage were Finns?

Mr. SELLWOOD. Oh, I would say about——

The CHAIRMAN. The Finns, Germans, and Austrians?

Mr. SELLWOOD. We have very few Germans; but I would say about 25 or 30 per cent of Finns and Scandinavians; perhaps 40 per cent. The balance are made up of a few Cornish, a great many Austrians, and some——

The CHAIRMAN. What percentage of Scandinavians and Finns have you on the range now?

Mr. SELLWOOD. I would say from 35 to 40 per cent.

The CHAIRMAN. Yet?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. At this time?

Mr. SELLWOOD. Yes.

The CHAIRMAN. I understood the Scandinavians had all gone.

Mr. SELLWOOD. Well, a good many of the Scandinavians have gone, but I do not quite class the Finns with the Scandinavians. There are a great many Finns.

The CHAIRMAN. Still there?

Mr. SELLWOOD. Yes, sir.

The CHAIRMAN. We will take a recess here until 2.30 o'clock.

Whereupon a recess was taken until 2.30 o'clock p. m.

AFTER RECESS.

The committee resumed its session at 2.30 o'clock p. m., pursuant to the taking of recess.

STATEMENT OF THOMAS F. COLE—Continued.

Mr. YOUNG. Mr. Cole, the Steel Corporation since its organization has expended many millions of dollars in improvements and building new plants, especially the new plant at Gary, has it not?

Mr. COLE. Yes, sir.

Mr. YOUNG. Do you think it would have been a safe proposition for that company to have expended those immense sums of money until it was secure in its ore reserve?

Mr. COLE. I do not.

Mr. YOUNG. Do you think it would be possible to get money to build any steel plant in this country now until all parties investing the money had it assured that they would have the ore to carry on their business for a good many years?

Mr. COLE. I believe they could not secure the capital to build a plant of any large size.

Mr. YOUNG. Mr. Gardner requested me to ask you whether or not you agreed with Mr. Sellwood's statement when he was on the stand, that he thought 40 cents a ton was enough price for Bessemer in the ground under average conditions, and if 50 cents would be about an outside price for ore especially well located. We would like to hear your judgment on that question. Express it in your own way.

Mr. COLE. You mean now for the fee of the land?

Mr. YOUNG. Yes.

Mr. COLE. Containing a good body of Bessemer ore?

Mr. YOUNG. Yes.

Mr. COLE. Under average conditions?

Mr. YOUNG. Yes.

Mr. COLE. As an independent operator I should hesitate to pay out a sum of money equal to 40 or 50 cents a ton for iron ore in the ground expecting to mine iron ore, ship it to market, sell it and make a profit, taking into consideration all of the changes that occur in the steel trade over a period of years.

Mr. BARTLETT. That is, at 50 cents a ton?

Mr. COLE. At 50 cents a ton.

Mr. DANFORTH. Why don't you get in that same consideration what he would consider a fair fee price?

Mr. YOUNG. Yes. What do you consider is a fair price for the fee?

Mr. BARTLETT. You say you would hesitate to pay that much?

Mr. Cole. Yes.

Mr. Young. Yes. He said as an independent operator he would hesitate to pay as high as 50 cents a ton.

What do you think would be a fair price for the fee of Bessemer ore under average conditions as it lies on the Missabi Range?

Mr. Cole. I would be willing to undertake to secure the capital and pay a sum equal to 35 cents per gross ton, with a view of mining and marketing that ore.

Mr. Bartlett. When you say per gross ton what do you mean?

Mr. Young. He means 2,240 pounds.

Mr. Bartlett. A long ton?

Mr. Young. Yes. What would you consider a fair royalty?

Mr. Cole. I would be willing to pay 65 cents a ton royalty for an exceptionally good deposit of that Bessemer ore located under average conditions on the Mesabi Range.

Mr. Bartlett. You consider, then, a difference between buying the fee ore and buying the royalty, about that per cent?

Mr. Cole. Yes, sir; provided the ore deposit could be worked out within a term, say, of six or eight years.

Mr. Reed. 35 and 65, you said.

Mr. Young. 35 and 65—35 for purchase and 65 for royalty.

Mr. Bartlett. There would be a difference of 30 cents between buying the ore in fee and buying the royalty?

Mr. Young. Yes. In addition to the question of interest, is there not a great advantage in the lease system, as leases are drawn on Lake Superior, because of the right of the lessee to throw up the lease on a few months' notice, so that, for instance, in a bad year if he got in a corner he could escape his liability.

Mr. Cole. It is an advantage.

Mr. Young. Does not that put him in a much stronger position?

Mr. Cole. It does.

Mr. Young. Have you any knowledge of the southern ore deposit?

Mr. Cole. Only through reading reports. I have never personally visited any of them.

Mr. Young. Are you familiar with any of the other ore deposits of the United States except those of which you have spoken?

Mr. Cole. I have visited iron mines in the Lake Champlain district, New York State.

Mr. Young. The Sherman Co. mines?

Mr. Cole. I have never visited their mines at Mineville, but I have visited mines on the other side of the lake—the west side of Lake Champlain, the Lyon Mountain district.

Mr. Young. What is the character of the deposit there, the character of the ore?

Mr. Cole. Magnetic ore.

Mr. Young. What grade?

Mr. Cole. It is low-grade ore. The merchantable product is secured by passing the crude ore through a concentrating mill and securing the rich magnetype, which gives a very rich product of iron ore.

Mr. Young. Is that so located that these mines can be operated and the ore sold at a profit in the eastern market?

Mr. Cole. I believe in normal times the ores can be marketed at a profit.

Mr. Young. You have never examined the district on the other side or around Mineville?

Mr. Cole. I have not, but I understand they have more direct shipping ores there, ores that do not have to be treated.

Mr. Young. Did you examine this district to the west of Lake Champlain enough to form any idea of how much ore there was there?

Mr. Cole. It would be a guess at best. I judge from the shape of the formation there, the geological conditions, that there evidently was a very large tonnage of crude ore, all of which would have to be taken out and concentrated before it would be merchantable.

Mr. Young. Do you know about what the cost of the concentration is?

Mr. Cole. I can not tell you.

Mr. Danforth. Can not that ore reach the Lakes through the canal from Lake Champlain, or is that canal only in process of construction?

Mr. Cole. They would have to go through the small canal up to the St. Lawrence River, and then up the St. Lawrence through the Welland to get up into Lake Erie.

Mr. Danforth. I think that ore does come to Charlotte, on Lake Ontario, now.

Mr. Cole. Possibly it does; undoubtedly it would be shipped there by rail.

Mr. Danforth. No; I think it comes by boat.

Mr. Cole. By boat?

Mr. Danforth. I think so.

Mr. Cole. The canal from Lake Champlain north to the St. Lawrence is very small.

Mr. Danforth. Well, the boats on Lake Ontario are pretty small compared with the western boats. Those boats come down into Lake Ontario, and that ore for a good many years, I think, has been sent to Charlotte.

Mr. Young. You spoke of a very large tonnage. Could you give any rough estimate so as to give us an idea of whether that means——

Mr. Cole (interposing). Oh, I would judge from the general geological conditions there and from what knowledge I have gleaned through conversations with those who are familiar with the district on the east shore of Lake Champlain, that there undoubtedly can be secured a very large tonnage of iron ore from that country, covering a period of the next one hundred to one hunderd and fifty or two hundred years. It would take a long, long time to exhaust the deposit.

Mr. Young. Running into several hundred millions of tons?

Mr. Cole. I would not want to say more than a hundred millions tons, Mr. Young. One hundred million tons is a very large amount of ore. I know myself what approximately a pile of iron ore containing 500,000 tons is. I can judge pretty accurately a pile containing that quantity of iron ore, and then I have a little conception of what 20 times that pile is. Therefore, I have some little conception of what a hundred million tons means, having dealt in the movement of iron ore in large quantities. A hundred million tons of ore is a very large amount. I should say the district will produce that eventually.

The Chairman. The Lake Champlain district?

Mr. Cole. Yes, sir; both east and west of the lake.

Mr. REED. The Delaware & Hudson Co. claim to own something like 500,000,000 tons, do they not, in Lyon Mountain?

Mr. COLE. I do not know what their claim is.

Mr. REED. You are skeptical of it anyway if it is that big?

Mr. YOUNG. What other places are there in the United States except those that you have mentioned, the Champlain district, the southern field, Utah, and the Lake Superior district, where there are large bodies of ore known to exist?

Mr. COLE. The geologists report that there is a very large tonnage of iron ore in the State of Texas. They are to-day mining and smelting some of that ore, I believe, in Jefferson County, Tex. It is a flat seam of ore that is claimed will produce 500,000,000 or 600,000,000 tons of ore eventually.

The CHAIRMAN. That is all guesswork?

Mr. COLE. Well, it extends over a very large area, Mr. Chairman, and it is of such a nature that it is very continuous and rocky, similar to the ore beds in the Southern Appalachian district. According to the best idea of the engineers and geologists who have examined the whole area, they think that over 500,000,000 tons of ore will eventually be secured from that territory.

Mr. BARTLETT. You speak about the Southern Appalachian district. Do you include the Birmingham district in that?

Mr. COLE. That is a part of it; yes, sir.

Mr. BARTLETT. Is there not some ore in the northwestern part of Georgia?

Mr. COLE. There is a similar deposit of iron ore in the State of New York, the Clinton ore bed in the western part of the State of New York. I believe the State geologist of that State estimates that there is about 500,000,000 tons of ore in that.

Mr. BARTLETT. Has it been developed any?

Mr. COLE. It is hardly merchantable to-day. It will cost more to secure it than it cost to secure the ores that are being marketed to-day. But when the time comes that the price of steel will advance to a point sufficient to warrant the mining of these ores they will all be mined and utilized.

Mr. BARTLETT. What part of New York did you say that is?

Mr. COLE. In the western part of the State.

Mr. BARTLETT. Is that the place where Edison undertook to develop by means of electrical arrangement——

Mr. COLE. No. That was the magnetic district in New Jersey, where he erected that very large and expensive concentrating plant and where he did some magnificent work in the way of devising ore-grinding machinery.

Mr. BARTLETT. Is that still in operation?

Mr. COLE. No, sir. He found that he could not do the work and market the ore at a commercial profit, while the competition from the Lake Superior ores and the ores in other parts of the country was as severe as it has been.

Mr. BARTLETT. There was an account of that which I read when it first started, and it was a very wonderful arrangement, I thought.

Mr. COLE. This is digressing, and I do not know that you want it, but the work he did there was very beneficial in other ways, in the mining of other material. Take the Portland cements, for one thing; and while it was not beneficial for the people of this country in the making of the ores available down there, yet, notwithstanding, it was of great benefit to the people of the country in the interior territory in other pursuits. His work has been most wonderfully useful to the people of this country.

Mr. BARTLETT. Could an arrangement like that be put into operation to mine ores elsewhere?

Mr. COLE. I believe when the time comes, Judge, that they will take our large reserves of low-grade ores in the Lake country and find some successful way of concentrating them to make them commercially valuable, and so that they can be utilized and produce steel at a reasonable cost.

When the necessity arises these things will be done. The western Missabe district has ores of lower grade, out of the same part of the district. The iron ore is intercalated with seams of sand, and sand and silicious material exist through the ore bodies in many places.

When it became necessary to take that part of the Missabe district and mine the ores and try to get a merchantable product, we found a way of concentrating all right.

The CHAIRMAN. Is it not true you have takonite piled up in the mountains which contains a higher grade of iron ore than a great deal of iron ore in the Appalachian district or in the Lake Champlain district?

Mr. COLE. Not a higher grade.

The CHAIRMAN. Higher in iron.

Mr. COLE. But the vitiating element of silica is there.

The CHAIRMAN. The iron contents.

Mr. COLE. There is undoubtedly quantities of takonite on the Mesabi Range that has more of the iron element than the ores of the Appalachian Range.

The CHAIRMAN. And that ore is piled up waiting until it can be concentrated.

Mr. COLE. Yes, sir.

Mr. DANFORTH. In connection with this New York proposition, I want to find out where this Clinton deposit is. You say the western part of New York. Do you mean Clinton County?

Mr. COLE. Mr. Echols, who is here, is a geologist, and he will tell.

Mr. ECHOLS. It reaches from Utica to Wayne County, near Rochester. It is above Charlotte.

Mr. DANFORTH. It comes out on the Lake at Barnersville?

Mr. ECHOLS. Yes.

Mr. COLE. There is an extensive bed there. I do not know just the location. But the State geologist has reported a large tonnage of ore.

Mr. YOUNG. Do you know anything about these New Jersey ores?

Mr. COLE. I do not.

Mr. YOUNG. Those ores were worked in the very early days, some of them, before the Revolutionary War, when the iron business was carried on in a very primitive way, in little furnaces.

Mr. COLE. Yes. Speaking of the finding of ore deposits and the working of them, there is a little mine up in the northwest corner of the State of Connecticut that is being operated to-day, taking out the ore and shipping it over to furnaces, hauling it in carts; and that mine was worked in Revolutionary times.

Mr. Young. That is still being worked?

Mr. COLE. Yes.

Mr. BARTLETT. Down here in Virginia, Washington had a little place, where he undertook to make iron, did he not? In the very early days?

Mr. YOUNG. When we were on the Cuban situation, I asked you a question as to the cost of mining. We turned off onto something else and I do not remember that it was answered. What would you judge that ore could be mined for on the north coast? I think you did tell us about 10 cents, for loading the cars.

Mr. COLE. Ten cents would be an outside figure for the cost of loading it into the railroad cars.

Mr. YOUNG. And what would it cost to get that into a vessel from the mine?

Mr. COLE. The distance is very short. Of course you would have to build machinery or ore docks to take it from the railroad cars and deposit it in the vessels. Ore dock structures are very costly affairs. The interest charge on the property would be considerable. Other machinery, operating clams, could take the ore from the railroad cars and deposit it in the hold of the vessel, and it could be erected for less money.

I should say for many years the cost would not exceed 15 cents per ton for transportation and handling it, transmitting it into the holds of ships.

Mr. YOUNG. So you could put that ore in the ships in the harbor for about 25 cents a ton in its raw condition?

Mr. COLE. Yes, sir.

The CHAIRMAN. How much would you have to expend in the way of railroad construction, ore docks, and so on, to be able to secure a plant that would, say, supply 15,000,000 tons a year from those mines; that is, to load 15,000,000 tons a year at the seaboard, at tidewater?

Mr. COLE. The railway part of it would practically be yards, sorting yards or yards to accommodate trains of loaded cars and empties being made up to go back to the point where they would be loaded, for it would be only a few miles from the mines down to the point where the ore would be transshipped or transferred into the steamer.

The CHAIRMAN. How far are those mines from tidewater?

Mr. COLE. In some places the mines are found very close to the sea, within a mile or a mile and a half.

The expensive part of the equipment would be in the shape of bridges and traveling cranes, on which the clams would be operated, to lift the ore up and run it out onto the ships or ore docks. I am inclined to the opinion that to handle that tonnage you would have to provide an initial investment of close to five millions of dollars.

Mr. YOUNG. I think that is about all I care to ask.

Mr. REED. May I suggest a question at that point?

Mr. YOUNG. Certainly.

Mr. REED. In regard to these ores in Utah, Cuba, and Brazil, perhaps Mr. Cole could tell us whether the Steel Corporation ever made any effort to acquire ores or to control or get a large part of those ore beds.

Mr. YOUNG. Yes. Do you know anything about that, Mr. Cole?

Mr. COLE. The Steel Corporation through its subsidiary, the Oliver Iron Mining Co., had examinations of ore beds in Utah made, but did not feel justified at this time in buying any at that point. They also had made an examination of the ore beds in Brazil, but did not make any investments there at the time. They have secured some ore in Cuba, but just what tonnage I am unable to say.

Mr. REED. Relatively small, is it not?

Mr. COLE. I believe so.

The CHAIRMAN. Was it a lease or the purchase of the fee hold?

Mr. COLE. In Cuba?

The CHAIRMAN. Yes.

Mr. COLE. All the owners there at the present time own the fee, I believe. There may be a very small area leased, but I believe the major portion of that is owned in fee.

The CHAIRMAN. What did you pay for it, when you acquired it for the Steel Corporation? What did the fee hold cost you per ton?

Mr. COLE. Well, the ore has been secured from private owners down there or from the Cuban Government direct. I do not believe there has been any transaction, a sale of the ores, to any extent, unless possibly Mr. Schwab made some purchases down there, at less than a cent a ton for the fee.

The CHAIRMAN. Do you know what you paid a ton for the Steel Corporation?

Mr. COLE. I do not. They secured those after I left their employ.

Mr. BARTLETT. Where were these cent a ton ores secured—in this same region you speak of?

Mr. COLE. Yes, sir. I do not know, but I believe the Steel Corporation explored for their ores down there, found them, and secured a title to them from the Cuban Government. I think that was so, but I am not sure about it.

The CHAIRMAN. Do you know what they paid the Cuban Government?

Mr. COLE. I do not.

The CHAIRMAN. Some few years ago, or a couple of years ago, in 1909 I think it was, the Geological Survey issued a little bulletin on Cuban ores in which they made the statement that the Spanish-American Co. bought their ore lands at $2.47 a hectare, and that as an additional inducement for them to take them, the lands were exempted from taxation for a certain number of years. I know nothing about the reliability of this information. I know it was published in the Geological Survey.

Mr. GARDNER. You were here yesterday when Mr. Sellwood was testifying as to the ore resources of the United States?

Mr. COLE. Yes, sir.

Mr. GARDNER. He testified that in his opinion there were 250,000,000 tons of merchantable ore in California. Would that be about your opinion?

Mr. COLE. I am totally unfamiliar with the extent of the ore deposits in California, Mr. Gardner.

Mr. GARDNER. All right. Now, then, in New Mexico he estimated it at a hundred millions. Do you know anything about New Mexico?

Mr. COLE. I know the location from which the Colorado Fuel & Iron Co. is deriving their ores at the present time.

Mr. GARDNER. Can you give any estimate as to the amount of merchantable ore in New Mexico?

Mr. Cole. I am unfamiliar with the magnitude or the extent of the deposits. Therefore, I would hardly care to estimate or guess.

Mr. Gardner. He estimated 50,000,000 in Texas. Have you any comment to make on that?

Mr. Cole. I believe there is a very much larger tonnage in Texas. From the reports I know of I should say there were between 500,000,000 and 600,000,000 tons.

Mr. Gardner. You estimate 500,000,000 instead of 50,000,000?

Mr. Cole. Yes, sir.

Mr. Reed. Of course, Mr. Gardner, that is not a contradiction of what Mr. Sellwood said.

Mr. Gardner. I quite understand. And I am not asking him for any such purpose as that; I am not trying to do that. I am trying to get by a precipitate of various men's evidence what the best testimony is as to the ore resources of the Western Hemisphere.

As to the New York deposits, Mr. Sellwood's testimony was first a hundred million tons, and he changed to two hundred millions, saying he had made a mistake the first time. Do you know anything about the New York deposits?

Mr. Cole. I should say 200,000,000 tons from our present knowledge of the country would be fair and right.

Mr. Gardner. Could you give any estimate as to Alabama?

Mr. Cole. That is, as to the Lake Champlain part of New York State. There is a large additional tonnage in New York State.

Mr. Gardner. How much would you estimate for New York State altogether?

Mr. Cole. The State geologists estimate five hundred to six hundred million tons, I believe.

Mr. Gardner. What amount of that is at present called merchantable ore?

Mr. Cole. I do not believe it is merchantable to-day; I do not believe it could compete with the iron ores in the Lake Supreior district.

Mr. Gardner. How much, in your mind, is merchantable to-day?

Mr. Cole. I think it would be used in a small way to-day. I should consider if the necessity arose for the utilization of that ore it would be merchantable to-day that it could be mined and smelted at a profit.

Mr. Gardner. Have you any idea what the metallic content is?

Mr. Cole. It is similar to the ores in Alabama, described by Mr. Bacon and others.

Mr. Gardner. It is a low metallic content ore?

Mr. Cole. Low metallic content, with lime and silica.

Mr. Gardner. How much ore with over 50 per cent metallic content is there, in your opinion, in the State of New York.

Mr. Cole. Over 50 per cent; a hundred million tons.

Mr. Gardner. That is about what? We would have to draw some line unless you had an exceptional situation.

Mr. Cole. Oh, this other ore is less than 50 per cent metallic, but it is useful.

Mr. Gardner. Thirty-six per cent in Alabama?

Mr. Cole. Yes.

Mr. Gardner. But I do not understand there is any situation in regard to coke and fluxing material in the Lake Champlain region the same as this in the Birmingham district.

Mr. COLE. This is not in the Lake Champlain district. This ore is over in the district near Rochester and Utica.

Mr. GARDNER. What is the percentage of ore in that Rochester district?

Mr. COLE. I imagine it will go about 36 per cent.

Mr. GARDNER. Is that worked to-day?

Mr. COLE. I do not know of any, except such as is being used to make small amounts of foundry iron.

Mr. GARDNER. Can it be used profitably to-day? Would you call it merchantable ore?

Mr. COLE. I would not agree to lease it under the head of merchantable ore to-day, such as we leased as merchantable ore in the Lake Superior district.

Mr. GARDNER. What does the Rochester member think about it?

Mr. DANFORTH. I had entirely forgotten it until Mr. Cole called my attention to it. There is a little furnace about 30 miles east of Rochester that is operated, or that has been operated. It may be operating still, but I doubt it. There is a furnace in Rochester, but it is not operated with that ore.

Mr. GARDNER. Do you care to estimate about Alabama?

Mr. COLE. I am not familiar with the district.

Mr. GARDNER. How about the Lake Superior mines—leaving out the Baraboo district—the mines of Wisconsin proper, what you call the Lake Superior mines? How much do estimate the amount of merchantable ore there to be?

Mr. COLE. I think it would be safe to say 1,800,000,000 tons, with possibilities beyond that, you understand.

Mr. GARDNER. I quite understand. I wanted to get somewhere near it. For instance, Mr. Sellwood estimated 1,600,000,000, which is approximately the same as yours.

Now, as to Wisconsin.

Mr. YOUNG. You mean the Baraboo district?

Mr. GARDNER. Yes.

Mr. COLE. One hundred million tons.

Mr. GARDNER. That was his estimate. Now, as to Utah.

Mr. COLE. Anywhere from six hundred million to a billion tons. It is a tremendous body of iron ore in there.

Mr. GARDNER. His estimate was a thousand million. What about Wyoming?

Mr. COLE. I am not familiar with the ore deposits at Sunrise. It would be only a guess.

Mr. GARDNER. Do you know anything about the Virginia deposits?

Mr. COLE. I do not.

Mr. GARDNER. This morning you went extensively into Cuba and Brazil. Do you know anything about the deposit in Lower California—that is, Mexican California.

Mr. COLE. I do not.

Mr. GARDNER. Do you know anything about any other deposit in Mexico?

Mr. COLE. I know in a general way there is a very large deposit of iron ore at Durango, Mexico.

Mr. GARDNER. Is that merchantable ore?

Mr. COLE. Yes.

Mr. GARDNER. What would you say was the amount of the deposit there?

Mr. COLE. I imagine they have anywhere from thirty to sixty million tons there.

Mr. GARDNER. Do you know of any other large deposits in Mexico?

Mr. COLE. We have had some deposits away down in the southern part of the country examined at Tulancingo; a very beautiful ore exists there. It is a wild country. It is only where the mountain trails happen to cross the deposit of iron ore that anything is known about them. In the interior there is no incentive for people to go and find iron ore. Undoubtedly very large additional quantities exist, but there is nobody going after it, and no way of using it.

Mr. GARDNER. There is no way of using it even if you find it, at present?

Mr. COLE. That is it.

Mr. GARDNER. Do you know anything about the Newfoundland ores?

Mr. COLE. Nothing any more than I have seen some very good specimens of ores from the interior of Newfoundland, that portion of the peninsula from which they are procuring their ores for the Dominion Steel Co. I am totally unfamiliar——

Mr. GARDNER (interposing). Are they securing Newfoundland ores for the Dominion?

Mr. COLE. I believe they are bringing some ores from the mainland over there.

Mr. GARDNER. Now, Newfoundland being the island, and the Dominion Steel Co. being on the mainland——

Mr. COLE. Yes, I understand; it is not Newfoundland. I mean the big peninsula.

Mr. GARDNER. That is, Cape Breton Island.

Mr. COLE. Cape Breton; I know they have some ores on that island.

Mr. GARDNER. Quite so.

Mr. COLE. But I believe a limited quantity.

Mr. GARDNER. I raised the question as to the island of Newfoundland, where they are just beginning to develop their ore resources.

Mr. COLE. I am not familiar with the ores there.

Mr. GARDNER. Do you know anything about the Nova Scotia ores? That will include Cape Breton Island.

Mr. COLE. No more than casual examinations that have been made by our engineers, which are not thorough, and not enough to give any idea of the whole.

Mr. GARDNER. Not enough to give an estimate?

Mr. COLE. No.

Mr. GARDNER. Do you know anything about Ontario?

Mr. COLE. What part; east of Lake Superior?

Mr. GARDNER. There was testimony yesterday in regard to some so-called Moose Mountain ores, north of Lake Huron, and also Antikokan, which they said was about a hundred miles west of Port Arthur, on Lake Superior.

Mr. COLE. Yes.

Mr. GARDNER. Do you know of any other Ontario ores?

Mr. COLE. There are scattered deposits of iron ores through quite a large area in Ontario—mines that were worked many, many years ago, but we have no estimate of the tonnages there.

Mr. GARDNER. I remember the year that the Canadian Pacific was built I spent a great deal of time in Ontario, and they used to have quantities everywhere of iron pyrites, some of which was supposed to be absolutely worthless.

Mr. COLE. Yes.

Mr. GARDNER. Was it absolutely worthless?

Mr. COLE. I believe that the day will come when they will take that material and secure sulphuric acid therefrom for fertilizing plants and perhaps save the metallic iron as well.

Mr. GARDNER. What is the metallic content of the ordinary iron pyrites in the country north of Lake Superior?

Mr. COLE. I can not tell you that. I know there are beds there. I know there are quite considerable quantities of it.

Mr. GARDNER. I had that in mind when you said everybody who had seen iron ore could tell it. I remember the Indians always thought that was gold there—the iron pyrites.

Mr. COLE. Yes. That will all be valuable when the time comes that it is needed.

Mr. GARDNER. Is that 30 per cent of metallic content; is that as high as that?

Mr. COLE. I should say it would be as high as that.

Mr. GARDNER. Well, it did not look to me as if that could ever be exhausted.

In talking about the availabilities of coking coal in connection with some of these large ore reserves you spoke about using electricity generated by water power. Is there a future in using that for smelting purposes?

Mr. COLE. I believe electricity to-day can be used for refining the steel, Mr. Gardner. I do not believe it can be produced at a figure low enough to justify any one saying it can be commercially used to smelt the iron ores.

Mr. GARDNER. What do they smelt ores with in Colorado?

Mr. COLE. With coke, unless in reverberatory smelters, in which they use the fuel oils.

Mr. GARDNER. They do use oils?

Mr. COLE. Yes, sir.

Mr. GARDNER. Somebody has told me they used oil in Colorado for smelting.

Mr. COLE. Oh, yes; they use it in many places in the country. They are using it in California to reduce copper ores. They are using it in northern Mexico, and they are using it in Arizona. They are using it for converting, or in reverberatory furnaces; also, I believe, in Nevada.

Mr. GARDNER. The oil would be too valuable to use in smelting iron.

Mr. COLE. They do not use it in blast furnaces at all. It is in reverberatory furnaces where the flame is carried a long distance, through horizontal furnaces.

Mr. GARDNER. It can not be used in blast furnaces?

Mr. COLE. I do not believe it can successfully. I have seen vertical blast furnaces erected in Arizona to utilize oil for fuel, but never successfully.

The CHAIRMAN. Does not the coke perform a double function both in producing heat and in a way acts as a filter for the molten iron? Does it not perform a chemical function as well as the function of producing heat?

Mr. COLE. Of course, it all depends upon the analysis of the coke itself, the percentage of ash, slag, and so forth that is in it—its physical characteristics. Good coke consists in keeping the furnace open so that the gases can get into the metallic content and melt it; and it is useful in blast furnaces, particularly a coke that is a strong coke and will not crumble too quickly.

Mr. GARDNER. Of course, the world is full of processes that could not be done that have been done, and we have also seen that which can not be used come into full use. But as far as the wisest people can see or claim to-day you see no future for smelting iron except by means of some product of coal?

Mr. COLE. I have said that the electric current is now used for refining steel and used very successfully. A tremendous advancement has come in that direction during the past few years—a very few years. I am hopeful that the day may come when thay can use electric current for reduction of iron ores, Mr. Gardner.

Mr. GARDNER. You think it is within the bounds of possibility?

Mr. COLE. Absolutely so. I should be very slow to say that I do not think it could be used commercially, or be commercially successful.

Mr. BARTLETT. As cheaply as the processes which are used now?

Mr. COLE. Possibly in time as cheap as they can smelt it with coke.

Mr. GARDNER. What I wanted to get at was the possibility of using it in places where you can not get coke except at tremendous transportation expense.

Somebody has testified, I do not remember who, with regard to the use of ore, if I recollect rightly, that there was some sort of proposition or idea or something that they could set up in California blast furnaces or steel works in the neighborhood of Los Angeles to use Utah ores.

Mr. COLE. They have very large tonnages of very good ore in the southern part of the State of California. I do not refer now to Lower California. I have no doubt the estimates made by Mr. Sellwood of the total tonnages in the State of California are very conservative and that they can be relied upon, for I know that there are scattered deposits over a very large area of the State, and some very large and good deposits in the southern part of the State that could be very readily taken down to Los Angeles and utilized for manufacturing iron and steel, when the day comes that Los Angeles is a distributing point for such products.

Mr. GARDNER. I understand. Would that be also true of Utah ores? Could they be shipped to Los Angeles?

Mr. COLE. I believe the use of the ores in the Utah field will be largely hauling them north into the valleys of the Great Salt Lake, and reducing them at that point and distributing the product from that point.

Mr. GARDNER. In other words you think that the deposit will be consumed down to the final product in that region?

Mr. COLE. I do.

Mr. GARDNER. And that the California product will be consumed on the Pacific coast?

Mr. COLE. Yes, sir.

Mr. GARDNER. I mean that the California reserve will become a California product and be used on the Pacific coast?

Mr. COLE. Yes, sir.

Mr. BARTLETT. May I ask a question here right in that connection. Where do the California people get their ore now, those that manufacture iron and steel, if there are any such, if those ore beds are not being operated to any considerable extent?

Mr. COLE. They are making some pig iron on Puget Sound, and no doubt they are shipping it south from that point, along the coast, supplying the demand for foundry purposes, because that is practically all they use out there.

Mr. BARTLETT. Where do they get their ore from?

Mr. COLE. There are quantities of ore around Puget Sound and in Washington.

Mr. BARTLETT. Do they get any from China?

Mr. COLE. They may import pig iron from China. I know of some importations of China pig metal that have been brought over there.

Mr. BARTLETT. That is all, Mr. Gardner.

Mr. GARDNER. There is a good deal of pig iron imported on the Pacific coast, is there not? I have an idea somewhere in my head they import some from Europe to the Pacific coast. Am I wrong about that?

Mr. YOUNG. We had some testimony from Mr. Farrell on that.

Mr. COLE. They have been buying pig iron in recent years from the Orient, and bringing it in to the coast.

Mr. GARDNER. I rather think there is evidence before this committee that there is a good deal of pig iron imported from Europe into California.

Mr. REED. Mr. Farrell testified to that.

Mr. YOUNG. He also testified as to China importation of pig iron.

Mr. GARDNER. I have here a statement that each decrease of 1 per cent in the metallic content of ore raises the cost of producing pig iron to 37½ cents at least, other things being equal. Are you willing to comment upon that statement, to give an opinion?

Mr. COLE. I would prefer that some good, intelligent blast-furnace man would answer that, Mr. Gardner. I am not familiar with the handling or reduction of iron ores in the blast furnaces, any more than just a common knowledge that has come to me from time to time. We had a tremendous operation on the Northwest, 14,000 men at work, where the chairman, I think, has seen some evidences of our activities; and it was quite enough for one man to lead the gang, so to speak.

Mr. GARDNER. That is to say, you would not care to give an opinion on blast-furnace operation?

Mr. COLE. No, sir.

Mr. GARDNER. I wish I could find somebody who would. I have seen figures from which that 37½ cents was made up, and it seems to me very important to find out what we have to look forward to as to the cost of pig iron.

Mr. COLE. When it has become apparent that we have got to concentrate the lean ores in the Lake Superior country, I have the utmost confidence in the ability of the American people to solve a way of successfully concentrating that material to make it commercially valuable and still give us our steel products at a reasonable cost.

Mr. Gardner. I presume that goes without saying, that the march of invention will probably be as rapid as the diminution of the metallic content of the ores used.

Mr. Cole. I hope so.

Mr. Gardner. But do you think the American people will ever devise a way by which they can reduce 54 per cent ore as cheaply as they can reduce 55 per cent ore? I mean, to make pig iron as cheaply out of 54 per cent ore as they can make pig iron out of 55 per cent ore?

Mr. Cole. I do not believe they can unless they find some way to get rid of a certain amount of the silica in the 54 per cent material before they put it into the blast furnaces.

Mr. Gardner. That is what I am trying to find out; other things being equal, to find out the ground of comparison before we go into the speculative field; to find out, as a matter of fact, how much more it costs to-day to produce a ton of pig iron out of 54 per cent ore than it costs to produce it out of 55 per cent ore. Those figures must exist somewhere.

Mr. Cole. They do.

Mr. Gardner. Because they are being done every day.

Mr. Cole. They do. A good blast-furnace man can tell you.

Mr. Gardner. A good blast-furnace man must know.

Mr. Cole. Yes.

Mr. Gardner. I think it is no indication that the penalty is only 5 cents for each per cent that you run off of your ore, because there has been testimony of other things that come into the calculation, from the point of view of the man taking pig iron, but there does not seem to be anybody that can tell us how much more it does cost to make a ton of pig iron out of 54 per cent ore than it does to make a ton of pig iron out of 55 per cent ore. You could not express an opinion?

Mr. Cole. I can not.

Mr. Young. You will have to put that question to Mr. Gayley.

Mr. Gardner. These questions come to us about three or four months after the man had been here. My mind does not work quick enough to see all these things at the time, but the matter becomes clearer in the mind as time goes on, and you find there are questions you wish you had asked.

Mr. Cole. There are other factors that enter in it that lead up to these things.

Mr. Gardner. I did not realize, perhaps, at the time that Mr. Gayley testified, how much of my own opinion as to the steel situation rested on the ore problem, on the exact values as to ores, and certainly if Mr. Gayley were here I should ask him that question. I can not get an answer to that question, it looks to me, unless you are willing to make a guess.

Mr. Cole. I do not want to make a guess.

Mr. Gardner. For instance, now, we know about what the Geological Survey thinks we have in the way of 35 per cent ore, and that is a 20 per cent reduction of our ores that are being used to-day in the Superior district. According to this calculation given to me it would cost to-day $7.50 more per ton of pig iron to make a ton of pig iron out of 35 per cent ore than it does to make it out of 55 per cent ore.

The CHAIRMAN. Put that question in a letter to Mr. Gayley, and if he can answer it right away his letter can be put in the record when these hearings are printed.

Mr. YOUNG. Right there, Mr. Cole, let me ask you this: Don't you know that you could concentrate that 35-per cent ore up to 55-per cent ore for a good deal less than $7.50 per ton?

Mr. COLE. There is such a very wide margin of profit there that I am sure somebody would do it, Mr. Young, but just how it could be done, or that it absolutely can be done, I am unable to tell you to-day. There are particles of very rich magnetic ore with a rock gang. You crush them and separate the two and take the rock gang away and you have a very good product. In the Lake Superior district in a very large amount of the low-grade ores the iron content is often disseminated through the whole mass and, therefore, you have got to pulverize it down very fine, indeed, in order to separate the iron particles from the siliceous material, and then make your separation. Then undoubtedly you will have to put it in some suitable form to use it in the blast furnace or other furnace that may be in use at that time; for there is a time coming, I firmly believe, when they will use those ores, but just in what form I am unable at this time to say.

There are some ores in the Lake Superior district that could be taken out and crushed, the gang material and the siliceous material separated therefrom, and a merchantable product secured, if there was necessity for it. But they have so much other ore to ship that they will not do it just now.

Mr. YOUNG. Have there not been quite extensive experiments in the concentration made at the Republic, the Champion, and the Humboldt a few years ago?

Mr. COLE. Concentration there is carried on at Michigamme by Mr. Powell and others. There is an electrical apparatus installed there. They succeeded in winning the metallic content of the ores, but the amount of tonnage of all the mines was so limited they did not feel like erecting a large plant.

Mr. REED. The concentrator at Coleraine is successful.

Mr. COLE. That is a different proposition. It was a proposition of separating siliceous material from a fairly good iron ore. We felt sure, from our knowledge of concentrating methods, that it could be done successfully. We went ahead and experimented, and we found a way of doing it not only very rapidly but at a very low cost. It is being done successfully now, and has made available a very large tonnage, indeed, or what was termed low-grade ores on the western Mesabi district.

Mr. GARDNER. Just one more question. This morning Mr. Sellwood was asked a question substantially like this: If a man had for sale the best possible deposit of ore land, of exceptional quality, in your opinion would it be possible for him to find a purchaser at 50 cents a ton for the ore in the ground, to buy the ore in fee?

I think that is substantially the question that was asked. Were you here when it was asked him?

Mr. COLE. I was here when you were asking questions along that line of thought. I did not just get the question, but, Mr. Gardner, pardon me, this does not need to go in the record, does it?

Thereupon informal discussion followed, which the stenographer was directed not to report.

The CHAIRMAN. Mr. Herbert Knox Smith, in his report, quotes a statement made before the Minnesota Legislature by a delegation from St. Louis County, in which county is the great bulk of the developed iron-ore deposits of Minnesota, the statement being made as late as 1909:

> The cheapest sales of fee ore we ever knew were for less than 1 cent per ton; the highest that we ever knew were for 15 cents per ton. There may have been sales at a higher price, but we have never known of one, and upon inquiry can learn of none.

Mr. YOUNG. What date was that?

The CHAIRMAN. 1909. Do you know of any fee sales prior to 1909 at a higher sum than 15 cents in St. Louis County?

Mr. COLE. I do not. The people are always very slow to raise large sums of money to buy, even up in that country. Unless they got the land at sacrifice prices they preferred to take a lease, paying a certain sum per annum, a certain price per ton on the ore.

The CHAIRMAN. You spoke about exceptionally good ore being worth from 35 to 50 cents per ton. That would be Bessemer ore?

Mr. COLE. Yes, sir.

The CHAIRMAN. What would you say of non-Bessemer ore?

Mr. COLE. The value of non-Bessemer ores and Bessemer ores is coming closer together each year. The increase in the volume of steel turned out by the open hearth process is increasing each year, and as the quantities increase the costs are being lowered, so that the difference in the value between the Bessemer and the non-Bessemer ores is coming closer together year after year.

The CHAIRMAN. What is the difference now?

Mr. COLE. Approximately 75 cents per ton.

Mr. REED. Per ton of metal?

Mr. COLE. Per ton of iron ore.

The CHAIRMAN. And that is per ton of iron ore at the lower lake ports?

Mr. COLE. Yes, sir.

The CHAIRMAN. I am not speaking of that. I mean iron ore in the ground.

Mr. COLE. It is pretty hard to say what differential to place on the two ores existing in the ground.

The CHAIRMAN. I want your best judgment—you are an ore man and I do not know anything about it—I just want your best judgment.

Mr. COLE. Well, a difference of 15 cents a ton.

The CHAIRMAN. And take the Mesabi district all over. What per cent would you class as exceptional ore such as you have been talking about? Take the whole body.

Mr. COLE. Forty per cent.

The CHAIRMAN. What would you say of the other 60 per cent? What is it worth in the ground? I mean from that which is barely merchantable, on up, you see.

Mr. COLE. I should say that 40 per cent additional was non-Bessemer ore of good quality, and the remaining 20 per cent of various grades, lower grade Bessemer and also lower grade non-Bessemer ore.

The CHAIRMAN. What would you put that 20 per cent at?

Mr. COLE. There would be a further difference of 10 cents a ton.

The CHAIRMAN. The holdings of the Steel Corporation throughout the Mesabi range are about on a parity with the holdings of the whole range?

Mr. COLE. I think the United States Steel Corporation own the cream on the range. They own the very best ore produced on the range.

The CHAIRMAN. How much of the 700,000,000 tons that they own are in the first class, the highest grade of Bessemer ore?

Mr. COLE. I am unable to give you those figures accurately.

The CHAIRMAN. Nobody could give them accurately.

Mr. COLE. I should guess between 50 and 60 per cent.

The CHAIRMAN. How much of it is of the second class?

Mr. COLE. Thirty per cent.

The CHAIRMAN. You spoke of having your engineers go over the country and make a thorough survey of the various ore deposits of New Mexico, Utah, Texas, New York, in the Appalachian region, and elsewhere, and in California. How much ore did they lease or purchase outright after these investigations for the Steel Corporation? How much ore did it obtain as a result of these investigations?

Mr. COLE. They did not secure any ore in the districts referred to.

The CHAIRMAN. Why was it they did not?

Mr. COLE. I presume they felt it would be some time in the future before those ores would be available for manufacture.

The CHAIRMAN. Those ores, as I understand, as Mr. Sellwood has said, either by virtue of their low degree of ore, the presence of silica, the absence of the market, or the remoteness of the materials to flux them rendered them unavailable at the present time?

Mr. COLE. Yes, sir.

The CHAIRMAN. Or in the immediate future?

Mr. COLE. In the immediate future.

The CHAIRMAN. You were speaking about the extent of the Michigan ore. Are the Michigan ranges any considerable per cent of the Superior region?

Mr. COLE. The ferruginous rocks in the various Michigan ranges cover quite an area and we have a portion of the Gogebic Range, also the entire Menominee, and the Marquette Range existing there, as well as a portion of a range that has been but lately prospected, the Messembria Range.

The CHAIRMAN. Take all those ranges. How do they compare with the Mesabi Range in extent.

Mr. COLE. The quantities of ore on these ranges probably are not as large as has been found on the Mesabi, but yet, nevertheless, as exploratory, and mining work goes on I am inclined to the opinion that the total quantities of iron ore found and removed from the various ranges in Michigan will come very close to totaling the total removed from the Mesabi Range.

The CHAIRMAN. What is the estimated tonnage of those ranges in Michigan now? Is it 100,000,000 tons?

Mr. REED. The record shows 189,000,000.

Mr. YOUNG. In sight?

Mr. COLE. That is the report made by hired officials to the State authorities of the State of Michigan to estimate these ore bodies for valuation purposes.

The CHAIRMAN. These ores are in vertical veins?

Mr. COLE. In vertical veins and in pitching troughs.

The CHAIRMAN. It is a mere guess as to whether they will discover any more or not?

Mr. COLE. No; I would not say a guess, Mr. Stanley. They have been mining on that Marquette Range over 60 years. Many a time I have heard people predicting a gloomy future for the district, that the mines were about all exhausted. The last work I did at the Lake Superior mines that had operated over 50 years was to plan work for another 50-year period. And these figures shown by these officers hired by the State to go there and estimate these ore bodies, show to-day, at the present rate of shipment, 40 years' supply in sight; and I venture to say that when that 40 years is by they may have more ore in sight then than they have now.

The CHAIRMAN. You mean 40 years for the United States?

Mr. COLE. Forty years at the average rate of shipment from that range.

The CHAIRMAN. You mean they have enough to supply the steel companies of the United States for 40 years?

Mr. COLE. I said at the present rate of shipment from that range, with the maintenance of the same average there is enough for a 40-year supply.

The CHAIRMAN. When they strike a vertical vein, they can only get its width, and they form an approximation of how far down they can afford to mine it, do they not?

Mr. COLE. No one can say where the limit of mining commercially ends.

The CHAIRMAN. With a vertical vein?

Mr. COLE. You want information, and I am going to try to give it to you as best I can.

The CHAIRMAN. That is what we want.

Mr. COLE. On the Gogebic Range, in our work there, in putting in our mining equipment, we were planning to go to a depth of 3,000 feet. No one would say we could not go deeper, while the ore deposits in Michigan are of as large bodies as the ore in the Mesabi. In other words, they may extend to such a great depth into the rocks of the earth that they may produce tonnages equal to the Mesabi, which is not covered with a rock capping.

The CHAIRMAN. You have a maximum depth to which you can go commercially. Your heat will increase one degree for every 50 feet after you get down a certain distance.

Mr. COLE. The rocks of the Lake Superior district are very old and it does seem as though——

The CHAIRMAN (interposing). Take it with the silver mining. They have recently found where they can not go farther, and are working under a spray of water on account of the heat. I mean that when you get down so many thousand feet the heat then will prevent you going farther. You can not go to the center of the earth after a vein of ore.

Mr. COLE. I understand that, of course, but there is a point to which you may be able to go, that is going to yield the tonnages I speak of, that I myself believe exists.

The CHAIRMAN. Do you know that point.

Mr. COLE. In the copper-mining district, which is in the same series of rocks—in the Gogebic Range the rocks overlap—and in those copper rocks they now go to a depth of over 5,000 feet, a mile vertically, and they lead down over 8,000 feet from where the vein outcrops on the surface. They are mining successfully. While the heat does increase, it is not at the rate of one degree for every 50 feet, as you say.

The CHAIRMAN. It is 1° for every 50 feet vertically; that is my recollection.

Mr. COLE. Nearly that; certainly in the first part of your operations. But when your shafts are opened at different levels, and you get a circulation of air through there, the temperature is much modified; therefore, I say while we are only mining 1,500 and 2,000 feet, as the maximum, in the ore deposits of the Lake Superior district I have no reason to doubt but what they will mine down to a very great depth. And while they are only putting in the machinery and equipment to go to a depth of 3,000 feet, nevertheless there is no reason that I know of why they should not go to a very much greater depth.

Mr. YOUNG. What is the temperature at the bottom of the Coleman and the Hector, which are over 5,000 feet deep?

Mr. COLE. I believe it is about 86° in the rocks until you get one or more shafts opened and gain a circulation.

Mr. YOUNG. I mean that exists in the mining.

Mr. COLE. In the actual mining?

Mr. YOUNG. Yes.

Mr. COLE. When they once get the circulation of air, the ventilation, where the actual mining progresses—the first is development work, the sinking of shafts, the opening of drifts, and that is a little hot. But once that is done and they get a circulation of air, the mining conditions are not abnormal at all, and the men work there very comfortably.

Mr. YOUNG. Is the temperature up in the seventies?

Mr. COLE. I can not tell you exactly what it is.

The CHAIRMAN. Are you not going on the assumption that having found one vertical vein succeeding another, one strike after another in that region, you believe you have not found all the strikes, but you do not know? Is not that the situation there?

Mr. COLE. That is true; that is the belief, and that is the belief of most eminent men. I think if you look in this report which was just handed to me yesterday—and pardon me if I refer to what the gentleman here says as to the Gogebic district. This was in line with what our worthy friend, the Judge, was speaking about yesterday:

> A part of the iron ores of the Gogebic district occur in tabular bodies that lie parallel to the bedding, and a part occurs in great widenings of these bodies at the intersection of dikes with a footwall quartzite or slate. The line of intersection of the dikes with the footwalls in general dips to the east, although in some places the dip is to the west and in others this line is horizontal. It was formally supposed—

You will note his language—

> it was formerly supposed that the upper dikes limited the ore bodies below, but it is now known that the ore bodies may be repeated on dike below dike, and to-day no one is willing to predict the depth to which this repetition may be carried.

The CHAIRMAN. I say, it is unknown.

Mr. COLE. Unknown, but where we have the experience of 25 or 50 years we feel reasonably sure that the knowledge gained in that 25 or 50 years is a pretty good guide to go on. Therefore when we are putting on our armor we always figure for a considerably greater depth than the actual known ore bodies we are then operating.

I want to call your attention to the fact that some of the very best engineers in the United States to-day at one time thought the Gogebic

Range was a very shallow range. In other words, that the ore deposits would be termed the absolute dikes. Now we find ore below those. And I want to say, without any disrespect to the geologists of our country, who have been doing a magnificent work, and who are doing in many ways work that is very useful, that they themselves change their ideas and their views after the miner gets his shafts and drifts and crosscuts through the rocks.

The CHAIRMAN. What is the difference in cost of mining this iron ore in the Gogebic Range at a depth, say of three or four thousand feet, underground methods, and a strip proposition, where you have the average amount of water to contend with, and an overburden, say of 50 feet.

Mr. COLE. We are not mining at the extreme depths you refer to. Fifteen hundred feet is approximately the maximum on the Gogebic Range.

The CHAIRMAN. I know that.

Mr. COLE. At the present time.

The CHAIRMAN. But my question is framed upon a condition not at present existing. We know the amount of ore they have there in sight, say a hundred million tons, within 1,500 feet of the surface. Now, if you are going to get another hundred million tons you must go deeper, say to 3,000 feet. What would be the difference in cost of mining, say, 20,000,000 tons at an average of 3,000 feet below the earth's surface, and mining the same vein in an open pit proposition with 50 feet of overburden?

Mr. COLE. I have no doubt the difference would be in excess of $1 per ton, somewhere between $1 and $1.50 a ton. I can not give you the exact figures, because there is no data upon which to base any estimate.

In line with that let me give you some little experience of what they are doing in the copper mining district of Lake Superior. In the copper mining district of Lake Superior they are to-day mining the rock containing the native copper metal from a depth of 2,000 down to 4,000 feet; are doing all of the development work, sinking the shafts, driving the drifts and crosscuts, to reach these lodes, stopping the rock, sending it to the surface, crushing it in their rock houses, transporting it on their railroads several miles down to their stamp mills, stamping it, pulverizing it completely so as to separate the gang materials from the native copper, and securing, say, 14 pounds of copper per ton of rock. And this 14 pounds of native copper when copper is selling at 12½ cents a pound is only worth $1.75 for the quantity in each ton of rock. In addition to these processes that I have enumerated, that copper metal has then to be taken out and sent to the smelting works and refined and shipped down east to the selling points, and all that rock contains is 14 pounds of metal per ton.

Now, they do not have any water to pump; that is, the water is very limited in the copper rocks of the Lake Superior district. But the record is an exceptional one. It shows what the activities of the miner man has brought about up in that country; and I am just as firm in my belief that the iron-ore miner will be successful in meeting any contingency that may be forced upon him, and that he will hold his costs fairly reasonable in the years to come.

The CHAIRMAN. What I was trying to get at was the difference in costs now. You speak of obtaining these Hill ores in order to meet any demand that might be made upon it. If the day you got these Hill ores you had had a demand for an increase of 80 per cent in your ores to be delivered to the lower lake ports, would you have gotten that ore from the Hill ore leases or from your old mines?

Mr. COLE. We would have had to largely fill from our old mines, and we had our own mines developed well ahead, so that we could meet almost any contingency which with we were confronted.

The CHAIRMAN. Take the Mahoning mine and the Hull Rust, where you have 160 to 200 acres stripped, and ore at a depth of 200 feet. Your capacity to deliver that ore is measured by the number of men obtainable and the capacity of the railroads to handle the traffic, it it not?

Mr. COLE. The Hull Rust mine was a pretty large shipper. It kept them fairly busy to take out, say, 3,000,000 tons of iron ore per annum. But I have no doubt if a contingency or an emergency arose that we could double that output from the Hull Rust mine.

The CHAIRMAN. Quadruple it, could you not? For instance, here you have practically a square mile of exposed surface. You can put in any number of tracks, just lay the tracks on the ground, and go ahead with the steam shovels. What I am trying to get at is that the measure of your capacity to deliver that ore would be the capacity of trains to carry it from the mines to docks, would it not?

Mr. COLE. That would be one factor in the situation. But when you increase your output, when you produce 3,000,000 tons of ore from a mine, and then you take and quadruple that output, that is a remarkable change. The difference between 3,000,000 tons and 12,000,000 tons is enormous, Chairman Stanley.

The CHAIRMAN. I know it.

Mr. COLE. It is enormous.

The CHAIRMAN. But what I mean is that ore is exposed 200 feet deep. What is to keep you from taking out 20,000,000 tons as easy as anything else?

Mr. COLE. You can practically work on only about two horizons. You can not work another 200 feet in thickness. You can only take your benches of about 25 feet in height, and so of course you are limited to the area largely.

The CHAIRMAN. One given horizon would be a circle practically a mile around, would it not?

Mr. COLE. After your development work had progressed for enough to have that circle, you see. But it takes time to develop these mines and get up to the maximum. I agree with you. Within a few years they could get up to a point where they could ship 17,000,000 tons; but while they were working to that end, working to be in shape to meet almost any extraordinary demand placed upon them, yet at the time I refer to if we could just double our output from the Hull Rust we would have felt we were doing pretty good work.

The CHAIRMAN. You spoke of the difference of opinion between various engineers as to the probable amount of ore in the Hill ore properties, running from two hundred and fifty to five hundred million. How did this vast difference of opinion occur where you had a flat body of ore, easily reached by drilling?

Mr. COLE. I assume that the engineers employed by Mr. Hill estimated that very much greater areas of the land which he proposed to turn into this lease contained ore bodies than it was actually found they did contain.

The Chairman. Had Mr. Hill's engineers made their estimates from actual drills?

Mr. Cole. Oh, no, indeed. The major portion of those lands was entirely unexplored.

The Chairman. Unexplored?

Mr. Cole. Yes, sir.

The Chairman. His estimates then were made practically upon the drillings in adjacent lands.

Mr. Cole. Some exploratory work that had been conducted on their lands, and undoubtedly examinations that his men had conducted on other lands.

The Chairman. How much of the entire Hill ore properties were stripped at the time the Steel Corporation acquired them?

Mr. Cole. Not to exceed 30 acres. That is, those lands that were turned over to the Steel Corporation.

Mr. Bartlett. Can you give us some idea of what proportion that would be to the whole, in acres?

Mr. Cole. It was a very large acreage. I can not tell you exactly how many acres there were, but a very large acreage.

Mr. Bartlett. That does not give us any idea of the proportion—30 to a large acreage.

Mr. Reed. It was much less than 1 per cent, if that will help you any.

The Chairman. There were about 30,000 acres.

Mr. Cole. A large acreage. A great deal of the land was off the range, or at least it was so far away that you would hardly think it would contain ore bodies, and you would have to do some exploratory work there to be sure it would not.

Mr. Bartlett. How many million tons were in the Hill properties, do you think?

Mr. Cole. Our engineers felt, like we all felt, that there was a possibility of a tonnage amounting to; well, up to 250 million tons that would be found on those lands.

Mr. Young. How many tons were under the land that was being stripped, about 30 acres, you think?

Mr. Cole. I should say roughly, five or six million tons in that area that had been stripped; perhaps a little less than that.

The Chairman. If you had known there were 250 million tons there, would you have made this contract—no more or no less?

Mr. Cole. If the matter had been left to me I should hesitate to make it, Chairman Stanley, for the reason with the minimum imposed it would be exceedingly difficult to go and get the quantities that would have to be taken out each year from that total tonnage of iron ore. You see, in mining, you have to get so many tons of each grade each year to forward in order to meet the requirements of the consuming public. And with the ore bodies being very much smaller in extent than was figured by Mr. Hill's engineers, I should hesitate to take over that lease and attempt to mine the minimum on that limited tonnage of ore instead of a grand total of five or six hundred million tons, which is the amount that existed.

The Chairman. Suppose there had been two billion tons of ore there. Would it have been a good proposition?

Mr. COLE. If there had been two billion tons of iron ore on the Hill land the Steel Corporation never should surrender the lease.

The CHAIRMAN. Why?

Mr. COLE. Because they would need it in their business. The growth of the iron and steel business in this country has been remarkable; and the growth or output of the United States Steel Corporation, forced upon them by the consuming public, the people who wanted steel, has forced the United States Steel Corporation to put millions and millions into plants and equipment, to meet the necessities of the occasion, to meet the needs of the public in times of great prosperity, to give them enormous tonnages of steel output, and they ought to figure as far ahead as they can in any district where the ores can be made available, to take care of that output. I believe to-day they can turn out 80 per cent more steel than they could in 1901 when the Steel Corporation was organized. That is a tremendous increase in the short space of a little over 10 years.

The CHAIRMAN. The Steel Corporation now has that ultimate capacity?

Mr. COLE. Yes, sir.

The CHAIRMAN. What per cent of its capacity is it running now?

Mr. COLE. I presume just now with an up-turn in steel commodities they are adding to their operating capacity very rapidly and are going up to full capacity in the near future. But for a long time they have been running at limited capacity, showing the burden that they have to take care of.

The CHAIRMAN. They are not producing anything like 80,000,000 tons now?

Mr. REED. He did not say that.

Mr. COLE. I said 80 per cent of their initial capacity when they were organized. And the fact they are producing less shows the burden imposed upon them at times, with all this tremendous capital invested, when they have to go slow because the public only want about 55 per cent of their capacity. But the public demand that they be in position with their railroads, their steel works, with all their facilities, to turn out this finished material to them in enormous volume, at low cost, at a time when they need large quantities.

The CHAIRMAN. Did you consider the fact in making this lease that this was about all the available ore in the Mesabi region at the time you made the lease—all the available ore on the market?

Mr. COLE. I believed at the time it was going to give us the major portion of available ore on that part of the Mesabi Range which was then developed. Understand, development work was still in progress on down beyond the Mississippi River, southwesterly, into Minnesota and beyond. Not knowing the full extent of the Mesabi Range, we believed this was giving us a very large proportion of the remaining ore the Mesabi Range as we then knew it.

The CHAIRMAN. You felt unless you did make this lease you had lost your opportunity to acquire any other available ore in large quantities on the Mesabi Range?

Mr. COLE. Yes, sir.

The CHAIRMAN. That would be a very important factor in determining whether you would make the lease or not?

Mr. COLE. Yes, sir.

The CHAIRMAN. If there had been only two or three hundred million tons there, would not they have added to the value of the ore in the whole range—the fact that the supply was so limited?

Mr. COLE. I can not see how it is going to add to any material extent to the value of the ores in the whole range, because we have not yet got to a point in the history of the steel industry where the supply of ores is so limited that it begins to affect the values to any appreciable extent.

The CHAIRMAN. Do you think that if to-morrow they should discover another Mesabi Range within 25 or 30 miles of you there, that it would affect the value of the ores in that region?

Mr. COLE. I believe it would affect it to a reasonable extent; I certainly do, not on the prices this year, because they are abnormally low, but taking them over the next 10 years I think it would have some effect on the value of these iron ores.

The CHAIRMAN. You were speaking of the Cuban ores. Were these Cuban ores known at the time you made this lease of the Hill properties?

Mr. COLE. Not generally known; no, sir.

The CHAIRMAN. You knew of them?

Mr. COLE. I visited those fields after that Hill ore lease was made, many years afterward.

The CHAIRMAN. Did the ore experts know of those ores at the time this lease was made?

Mr. COLE. No, sir; they had not examined them.

The CHAIRMAN. Would it be practicable, in your opinion, any time in the near future to import ores to this country from Brazil and smelt them in competition with our ores?

Mr. COLE. If a line of steamers carrying 18,000 or 20,000 tons of iron ore were built to transport the ores from Brazil to seaboard cities in this country, with a reasonable amount of return cargoes to Brazil, I believe that those ores would come into competition with the ores of this country.

The CHAIRMAN. That is an impossible thing in itself, is it not?

Mr. COLE. It is to-day, but one can not tell to what extent our trade with Brazil and the Argentine Republic may develop.

The CHAIRMAN. For instance, the ore tonnage from the head of Lake Superior is greater than the entire tonnage of New York Harbor.

Mr. COLE: It is tremendous.

The CHAIRMAN. Because I understand the tonnage of New York Harbor is 18,000,000 tons a year, in round numbers.

Mr. COLE. Your question is, if these ores could come in. They are not being mined in grand total quantities such as we are using to-day.

The CHAIRMAN. I mean, is there any reasonable prospect of those ores coming into this country in competition with our ores any time in the near future?

Mr. COLE. I should say there would be, because of the fact the metallic content is very high and the moisture or water in the ores is very, very low.

Mr. GARDNER. There are three conditions that have to be met. First, if it pays somebody to put on a line of steamers.

Mr. COLE. Yes.

Mr. GARDNER. Second, is there now a duty charged on ore coming in here?

Mr. Cole. Fifteen cents a ton, under our present laws.

Mr. Gardner. Then, when you gave your answer you contemplated an import duty of 15 cents a ton, did you?

Mr. Cole. I contemplated that.

Mr. Gardner. Did you contemplate any export duty on Brazilian ores?

Mr. Cole. Yes, sir; a reasonable amount.

Mr. Gardner. In other words, given the present existing condition of affairs, with the export and import duties of the two nations, the only thing which prevents those ores from coming into competition with ours to-day is the fact it is not possible at present to establish a profitable steamship line.

Mr. Bartlett. Oh, no; because they are not being mined out.

Mr. Cole. When the demand arises that they have to have more ore on the Atlantic coast then it is possible to take those ores from the Brazilian field and bring them to the Atlantic coast, smelt them and make steel, and sell it at a fair profit.

Mr. Gardner. Provided it pays anybody to have a steamship line.

Mr. Cole. They can readily build steamers, don't you know, to do this.

Mr. Gardner. The return freight has something to do with it.

Mr. Cole. Something to do with it; yes, sir.

The Chairman. How far is that ore from tidewater?

Mr. Cole. To my best knowledge, about 150 miles; but I am not dead sure about that distance.

The Chairman. And it would have to go over a mountainous country?

Mr. Cole. No, sir; the present railroad from Rio de Janeiro out to the mines, up over two or three mountain ranges, is a bad railroad to operate on, having adverse grades; but the new line——

The Chairman. An adverse grade is a very serious obstacle in the handling of heavy tonnage like ore, is it not?

Mr. Cole. Yes, sir; it is.

The Chairman. Could you haul 30 cars to an engine over that road under any circumstances?

Mr. Cole. Thirty cars?

The Chairman. To the engine.

Mr. Cole. Oh, no.

Mr. Young. Why do you not let Mr. Cole complete his answer. He started to say that while the road that now existed there was mountainous, that they were building another road.

Mr. Cole. The road now existing runs over two or three mountain ranges, as I said, with adverse grades, coming down to the sea. The new road that is being built by an Englishman, from Victoria, another seaport north of Rio de Janeiro, follows a watercourse up into the mountains, the headwaters of which are in the mountain regions where ore exists; and that railroad will be like the railroads in the Lake Superior district, the principal part of it, with grades in favor of loads coming down to the sea.

The Chairman. What would be the length of the haul?

Mr. Cole. I am told that it is approximately 150 or 160 miles. I do not know if that information is accurate, but I imagine it is very close to it.

The **Chairman.** Then that ore when it did get here would be confined to the furnaces on the Atlantic coast?

Mr. **Cole.** And to the steel-making plants in Germany, Belgium, France, and England.

The **Chairman.** I am not talking about that. I am talking about using that ore, making it a commercially available ore, which is in competition with ores now produced in the United States.

Mr. **Cole.** Yes; I should say that the points would be on the Atlantic coast.

The **Chairman.** It could not go into the interior.

Did the Steel Corporation make any purchases of Brazilian ore?

Mr. **Cole.** Not that I know of. They did not during the time I was with them.

The **Chairman.** When was it their engineers went down there?

Mr. **Cole.** Four or five years ago; about four years ago.

The **Chairman.** Why did not they make these purchases? They knew then as well as now the prospect of exhausting their ore reserve.

Mr. **Cole.** The great bulk of the plants of the United States Steel Corporation are located in the interior, and they utilize the ores from the Lake Superior district almost entirely.

The **Chairman.** And they will continue to be in the interior?

Mr. **Cole.** Well, that country is a growing country, the country of Ohio, Indiana, Illinois, Iowa, the Minnesotas, the Dakotas, and on up following the great wheat belt—it is all the growing country of this nation.

The **Chairman.** The demand for finished steel is from the sections west, outside of the steel regions.

Mr. **Cole.** The great bulk of it.

The **Chairman.** Taking it all in all, the Steel Corporation did not consider those ores available, or they would have purchased them.

Mr. **Cole.** They did not purchase. I do not know just what their conclusions were with reference to their availability at that time.

The **Chairman.** How much stripping have you done on the Hill ore properties?

Mr. **Cole.** That has all been conducted since I left the company.

The **Chairman.** And you do not know about that?

Mr. **Cole.** I can not tell accurately, but from the plans that were laid, and the equipment that was installed while I was with the company, I know what the intention was, I know the present exporting quantities, and I should say roughly speaking, that 20,000,000 to 25,000,000 yards of surface material had been used and that should give them 40,000,000 to 50,000,000 tons of iron ore uncovered.

Mr. **Bartlett.** About ten times as much as they had when they bought it.

Mr. **Cole.** Yes, sir.

The **Chairman.** How much of that ore has to be concentrated?

Mr. **Cole.** I do not believe the stripping has been conducted at any point where concentrating ore exists.

The **Chairman.** They built a concentrator there?

Mr. **Cole.** That is to handle ores from other land as well as the Hill land.

The **Chairman.** Did not they concentrate vast quantities of Hill land ore?

Mr. COLE. They probably concentrated some ore from the lands that the Hill people owned a half interest in, and that the Steel Corporation owned a half interest in. They may have concentrated some of the ores from that land, but all the rest of it has been merchantable ore that they have been exposing. In one case on lands that the Hill people owned a half interest in and the Steel Corporation owned a half interest in, that exceeds 14,000,000 tons of good grade Bessemer ore lying next to the surface sand. That is known as the Hill mine, and that ore is being mined and shipped at a good liberal rate each year.

The CHAIRMAN. How much of the Hill ores would have to be concentrated of the 250,000,000 tons that is in there?

Mr. COLE. I am utterly unfamiliar with the nature of the ores as shown up by the development work that has been conducted since I left the corporation; but as a rough guess I should say 60 per cent probably will have to be concentrated.

The CHAIRMAN. What per cent of the ore that is concentrated is silica that has to be gotten out, or sand?

Mr. COLE. It takes about a ton and six tenths of crude ore to make a ton of merchantable product.

The CHAIRMAN. What is the cost of concentration?

Mr. COLE. The cost is very low. I should place it under 10 cents per ton.

Mr. BARTLETT. At the time the Steel Corporation was organized in 1901, and after they acquired these ores in the Hill land, what proportion of the then available (I do not mean speculative) ores did that give the Steel Corporation?

Mr. COLE. In the Lake Superior mining district?

Mr. BARTLETT. Yes, and all they owned. What proportion of the available ores of the United States did that give them?

Mr. COLE. In the Lake Superior mining district——

Mr. REED (interposing). No, in all the United States.

Mr. BARTLETT. Yes, the United States, and put into it the Alabama purchase afterwards, the Tennessee Coal & Iron Co.; I will bring it up to that.

Mr. COLE. I should say about 25 per cent including the 400,000,000 tons that I happened to hear Mr. Bacon testify to as their holdings in the Alabama district—about 25 per cent.

Mr. BARTLETT. How much of the available ores in the Michigan and Lake regions did they have; what proportion of those did they have?

Mr. COLE. At that time?

Mr. BARTLETT. Yes, including the Hill lease.

Mr. COLE. But the Hill lease was not in at that time. They acquired other leases in addition to the Hill ore lease; they acquired large tonnages in addition to that.

Mr. BARTLETT. I understand.

Mr. COLE. But when the Steel Corporation was organized in 1901, I imagine their holdings of iron ore were not in excess of 45 per cent of the Lake Superior district.

Mr. BARTLETT. To-day what is their proportion of ownership in that region?

Mr. COLE. I should say they own somewhere between 50 and 58 or 60 per cent.

Mr. Gardner. For the sake of the record let us get this question straight, so that we may know whether that question is asked as to, and your answer includes, all Hill lands, or not.

Mr. Cole. I was leaving the Hill lands out.

Mr. Gardner. I want to know for the record, in giving that percentage, whether you mean the state of affairs which existed January 1, 1911, or the state of affairs which will exist when the lease expires, in 1915.

Mr. Reed. Does Mr. Cole know how many of those Hill lands have been actually surrendered, up to date? Unless he does he can not answer.

Mr. Cole. I am throwing them all out.

Mr. Bartlett. I will put the question this way: After the acquisition of the Hill lands, up to say 1910, what proportion of the ores in that region did the Steel Company own or had they acquired at any time, whether they had disposed of them or not?

Mr. Cole. I should say it was a little above two-thirds.

Mr. Bartlett. And with the addition of the Tennessee Coal & Iron Co. in 1907, what proportion of ores of the United States would that have given them? I do not mean speculative or what may happen in the future; I mean the available merchantable ores of the United States.

Mr. Reed. Is not that the same question you asked Mr. Cole a moment ago?

Mr. Cole. No, he asked me as to the beginning.

Mr. Bartlett. Yes, I asked at the beginning.

Mr. Cole. I should say between 40 and 45 per cent.

Mr. Gardner. Let me get that again. In 1907 after the acquirement of the Tennessee Coal & Iron Co.'s property the merchantable ore supply, taking the merchantable ore supply of the United States as it was in 1907, at that time you say that it was about 45 per cent.

Mr. Cole. I should say between 40 and 45 per cent.

Mr. Gardner. I presume there is a greater merchantable supply to-day than there was in 1907.

Mr. Cole. I presume there is, Mr. Gardner.

Mr. Gardner. That is, more inferior ore is being used, and that makes the supply greater.

Mr. Cole. Yes, sir.

Mr. Gardner. I wanted it to be perfectly clear that it was 45 per cent of all, and as I understand it is 45 per cent of the merchantable ore on that date, 1907.

Mr. Cole. Yes, sir, and included the ores that came to them under the Hill lease.

Mr. Bartlett. That was covered in my question.

Mr. Gardner. The Hill lease, the Tennessee Coal & Iron Co., the original acquisition, and any intermediate purchases.

Mr. Bartlett. Now, Mr. Cole, you are an intelligent, experienced business man. You know the purposes of the law known as the antitrust law. I do not mean the legal effect, but you know the purposes which it is intended to obtain, to prevent monopoly.

Mr. Cole. I have an idea about it.

Mr. Bartlett. Do you think it proper public policy in inquiring whether or not the Steel Corporation or any corporation, has a monopoly of business, a monopoly of the ore, that we should inquire as to whether there are available ores in Brazil, Mexico, or other foreign countries? Do you think that is a proper inquiry?

Mr. COLE. I do.

Mr. BARTLETT (continuing). To determine whether or not any corporation has a sufficient amount of necessary product in the United States, in conducting its business, in inquiring as to whether or not the Steel Corporation has a monopoly of the ores of the United States—I do not say that it has; I do not even intimate it has—that the fact there existed in Mexico or in Brazil or other countries like China or Siberia or other places that might eventually be accessible to the American consumer of ore—that those matters ought to bear upon the question to determine whether or not in the United States the Steel Corporation had a monopoly of ore?

Mr. COLE. Why, I think it would be essential to get at all of the facts of the case, to view the whole situation from a world-wide standpoint, because in these days commercialism has caused the manufacturers in one country to place their product in other countries. China to-day is sending its pig iron over to the United States and selling it along the Pacific coast at figures that the blast-furnace men in the East can not meet. Then the United States Steel Corporation is making material, I believe well over a million tons of finished material a year, and exporting it to the other nations of the world.

Therefore, in this day of quick transportation and quick news service, and close contact with the business of the entire world, I should say it would be perfectly proper to take into consideration all of the factors surrounding the iron and steel industries of the world.

Mr. BARTLETT. Then, if the United States Steel Corporation, instead of owning 40 to 45 per cent of the available ores of the United States in 1907—I use that year as a mere illustrative date—owned 100 per cent of all the available ores of the United States, merchantable ores, and there were accessible to the independent manufacturers, or those who desire to manufacture, ores in Lower California, or in Mexico, or in Cuba, or in Canada, or South America, from which at the present time, or at some future time, by the proper use of large capital, the people might obtain their ores, would you consider that was a monopoly of the ores of the country?

Mr. COLE. Yes, sir; I should consider that they were monopolistic in their holdings, if that condition existed.

Mr. REED. Judge Bartlett, will you not explain to Mr. Cole—he is not a lawyer—that the Sherman Act is intended to prevent restraints of trade, and that if trade was not restrained by monopoly because of the availability of these adjacent ores, it might not violate the act?

Mr. BARTLETT. I did not say it violated the act. I started out with the question of public policy. I was careful not to suggest a violation of the act.

Mr. REED. I thought you took the act as your text.

Mr. BARTLETT. No. I confined the question to the matter of public policy.

Mr. GARDNER. Do you not think that one of the elements in deciding that is to make up your mind what the motives were of the United States Steel Corporation in acquiring those very large ore reserves?

Mr. BARTLETT. Yes.

Mr. GARDNER. Whether to protect their future business or whether it was to prevent somebody else getting the reserve.

Mr. BARTLETT. Yes.

Mr. **Gardner**. It seems to me that is a very material question from that point of view. Of course, I think it is exceedingly necessary for us to know about the Brazilian deposits, for other purposes; but along the line we are discussing now I should be glad if you would develop that question of motive.

Mr. **Reed**. Nobody has asked Mr. Cole that.

Mr. **Bartlett**. I will be glad to ask it.

You were a member of the Steel Corporation when these ore holdings were obtained, were you not; a director or a member of it in some way?

Mr. **Cole**. I was an officer of the Oliver Iron Mining Co., one of the subsidiary companies of the United States Steel Corporation.

Mr. **Bartlett**. I thank you for the correction.

Mr. **Gardner**. That is when the Hill lease was made?

Mr. **Cole**. Yes, sir.

Mr. **Gardner**. As the record of your answer now appears, you were when all these acquisitions were made.

Mr. **Bartlett**. I mean to say when the Hill lease was obtained.

Now, what could have been the inducement from a business standpoint or any other standpoint for the Steel Corporation to acquire the Hill property at the price they paid for it?

Mr. **Cole**. The mining costs on the Mesabi Range are so much lower, the ores are made so much more quickly available than they are on the old ranges, in mines where the ore deposits are deep-seated, that that was a considerable incentive in their securing what they supposed was a very large tonnage of iron ore on that range, and tying it up at least until they had an opportunity to explore it thoroughly.

Mr. **Bartlett**. There was some idea too of keeping other people from getting it, was there not?

Mr. **Cole**. Not in the least. They were out to look after their business needs, and the conditions that were confronting them, you understand. When the iron and steel business of this country could be measured up in deposits of nine and ten million tons of iron ore from the Lake Superior each year, it was altogether a different proposition to the time when we were outputting 44,000,000 tons of iron ore each year. The tremendous amount of money that had to be put into the transportation facilities, in providing the means for shipment, into building the necessary blast furnaces, into building the enormous steel works—in view of that situation, there would not be any prudent business men on earth who would dare to invest these enormous sums of money into these various enterprises, that were going to keep increasing year after year, as the growth of this country demanded, without seeing they had the raw material to justify such an enormous expenditure.

Mr. **Bartlett**. I understand that, that the enormous investment of money, the enormous expenditures, were made with a view of controlling the trade in that particular business.

Mr. **Cole**. Not controlling it. They were manufacturing a good, fair ratio of the total tonnage of this country, and they wanted to keep manufacturing ——

Mr. **Bartlett** (interposing). What was the purpose then of creating a corporation, and consolidating all these various corporations, if it was not to control the trade?

Mr. **Cole**. I have not any doubt but what it was designed for a steadying influence in the trade; I have not any doubt but what it was designed for that. For I want to tell you I never again want to see the mining industry in the Lake Superior region put back to the time when we had to put our hands into our pockets to pay the miner who was working for $1.20 and $1.40 a day, going down into the mines and laboring many hours each day, to turn out a large output per day, and when we were getting it out, shipping it to Lake Erie, and in some cases having to sell for $2 a ton. I never want to see that time again; I never want to see the time when the children of those men working in the mines did not receive proper clothing to go to school, when the good, intelligent, honest laborers of this country were crowded down to a point where they were receiving what they were at that time.

Since the organization of the Steel Corporation and other companies engaged in manufacturing steel in this country, there has been an ever-increasing addition to the price paid the laboring man up in our district, until to-day he is receiving I consider a fair recompense for the work he performs, and is able to take care of his family as he should care for it.

I never want again to go back to the old days when severe competition was in existence, when we had to mine these ores and send them down for a mere pittance, because the Lake Superior mining district produces the best ore in the world outside of that district which may produce it sometime, located in Brazil.

Mr. BARTLETT. You do not believe in competition in business?

Mr. COLE. I believe in reasonable competition. I do not believe in competition that compels people to pay wages that were paid during the period to which I refer, prior to the organization of the Steel Corporation.

Mr. BARTLETT. You think then that the Steel Corporation has prevented what you call destructive competition?

Mr. COLE. I believe the Steel Corporation has had a steadying influence on the trade, and I believe that it has to a reasonable extent prevented destructive competition, although prices have fluctuated during the time that they have been in existence, due to the lessened demand at times.

Mr. BARTLETT. Have the hours of labor been lessened since that time?

Mr. COLE. In some cases they have. In the iron mining district of Lake Superior I believe the hours of labor have been pretty nearly the same since the organization of the Steel Corporation as before, except that recently I think there has been some modification. Our miners underground have worked nine hours a day, a portion of the time, about one hour being consumed a day in getting from their change houses into the mines and getting to their places of work, and getting away from them.

Mr. YOUNG. Recently have not all the iron mines in the Michigan district gone onto the eight-hour basis?

Mr. COLE. I was advised while I was in the South that they had changed their hours of labor to eight hours.

Mr. GARDNER. Does that mean eight hours from the mouth of the mine back to mouth of the mine?

Mr. COLE. No, sir; I understand it will be to wherever they work.

Mr. GARDNER. And when you are speaking of nine hours, do you mean nine hours actual work or nine hours from the mouth of the mine to the mouth of the mine?

Mr. COLE. Ten hours from the mouth of the mine to the mouth of the mine.

Mr. GARDNER. Nine hours at work and one hour traveling?

Mr. COLE. Practically nine hours at work. They take their time to get into their places of work.

Mr. GARDNER. Nine hours of work and one hour of travel; is that about it?

Mr. COLE. Practically so. They are not traveling all the time. They have to wait at the mouth of the shafts for their turn to get on the cages and be lowered down, and wait underground at times to get to their place on the cage to be hoisted to the surface.

Mr. BARTLETT. Now, going back just a moment, how many years will it be before it is necessary to seek ore from the Brazilian, the Canadian or the Mexican mines?

Mr. Cole. It is difficult for me to estimate what the future of this country will demand.

Mr. BARTLETT. You know what the last 10 years has been. Take it for granted it will not be any greater.

Mr. COLE. I would not like to take it for granted, because when you are producing 5,000,000 tons of steel a year you can readily understand how you may produce 10,000,000 tons of steel at the expiration of a 10-year period; but when you get up to producing twenty or twenty-five million tons of steel in a year it is another matter to begin to figure you are going to increase to fifty or fifty-five millions in a 10-year period. These tonnages get so enormous you can hardly expect the same ratio of increase to continue.

Mr. BARTLETT. Do you or not believe that the ore holdings of the Steel Corporation obtained in this region, also from the Hill properties and also from the Birmingham region, the ownership by the Steel Corporation of a railroad and other transportation facilities, owned by it through its subsidiary companies, that that gives it an immense advantage over other steel producers, or people who make iron and steel products in the United States?

Mr. COLE. I consider the United States Steel Corporation in the Lake Superior district own the very best——

Mr. BARTLETT (interposing). I am taking all their facilities and adding them all together—the ownership of the ore that they own in the Lake Superior district, their ownership of the Tennessee Coal & Iron Co., their ownership of railroads, which they own through subsidiary companies, and also steamship lines; does that not give them an immense advantage over what we call independent manufactures, or those competing with them?

Mr. REED. You mean an immense unfair advantage?

Mr. BARTLETT. I did not use the word "unfair," at all.

Mr. REED. I know you did not, and that is why I thought the question was ambiguous.

Mr. BARTLETT. If you insist I will put it that way. I do not care to use the word. I mean an immense business advantage.

Mr. COLE. Will you not allow me to answer the question in my own way. I would say the ownership of the very best bodies of iron ore in the Lake Superior district by the Steel Corporation gives them some advantage; the ownership of railways in Minnesota, transporting that ore down to the Lakes, gives them some reasonable advantage; the ownership of steamship lines does not give them such a very large advantage, because a great many of their boats are pretty old, and they only carry very small tonnages now as compared with modern ships that are being built to-day. As to the advantages after it reaches the point of consumption, I can not see why other people may not be in just as good a position.

But as to the upbuilding of these plants, the putting of them in good shape, as the Steel Corporation officials are, I should say that they have a reasonable advantage over the other competitors.

Mr. BARTLETT. Not an unreasonable one?

Mr. COLE. Not an unreasonable one; no, sir.

Mr. BARTLETT. You think then it is proper public policy—I do not know that we can control it—to permit corporations engaged in business, like the Steel Corporation, to own transportation companies, public utilities, like railroads and other things, facilities of that sort?

Mr. COLE. Well, I am familiar with the ownership of their railways in the Northwest, in the ore-producing region, and I should say up there, with the short season of Lake navigation, only seven months in the year, it is almost essential that they own and control the transportation facilities for getting out that enormous tonnage of iron ore that they are forced to send down to the Lake ports each year.

Judge, if per chance some condition would ensue up there that they were not getting the ore down, and some consuming interest of this country should suffer, what a hue and cry would be raised, that they could not get it in a hurry. When it is once provided for during the seven months of the Lake navigation season, it has got to be moved in a hurry.

The CHAIRMAN. If some expert railroad man would guarantee an average return of 150 per cent on its capitalization and 66⅔ per cent on its operating charge, you could get a little of that ore hauled for you?

Mr. COLE. I have not any doubt a lot of railroad men would like to do that business up there. I have no doubt about it.

The CHAIRMAN. As long as they made that much, they would be pretty likely to do it.

Mr. COLE. I would like to answer your question by again stating that by reason of the volume of material that has to be moved in the short season, some years six months of lake navigation, it is almost essential that the Steel Corporation should itself haul that amount of ore.

The CHAIRMAN. Don't you think as a business man, don't you believe that any common carrier, realizing he could get 66⅔ per cent for an expenditure of 33⅓ per cent, would be pretty diligent in turning over his money?

Mr. COLE. There was not anybody diligent to build roads up into that region when the operating companies first went up there and wanted transportation facilities.

Mr. REED. I fancy lots of people would be glad to take the successful parts of the Steel Corporation over now that would not have been so anxious to take them at the beginning and build them up.

The CHAIRMAN. The major portion of this ore is in St. Louis County, Minn.?

Mr. COLE. Yes, sir; the major portion.

The CHAIRMAN. The tax commission keeps a very close account, I believe, of the ore deposits for the purpose of taxation. They have them all listed?

Mr. COLE. In both St. Louis and Itasca Counties.

The CHAIRMAN. The Oliver Iron Mining Co. of course is an operating company, that handles ore for manufacturing concerns. The Interstate Iron Co.—is that a manufacturing concern?

Mr. COLE. That is a mining corporation in Minnesota for the Jones & Laughlin people.

The CHAIRMAN. The Alberta Iron Co.

Mr. COLE. I do not know where that mine is located.

The CHAIRMAN. They operate the Alberta mine.

Mr. COLE. I can not tell you its location. It is probably independent oi owned by one of the so-called steel concerns.

The CHAIRMAN. It is a manufacturing concern. It gets out ore for a manufacturing concern?

Mr. COLE. I can not tell you that. That may be some new property since I left active operation.

The CHAIRMAN. Corrigan-McKinney & Co.?

Mr. COLE. They are sellers of iron ore; also manufacturers of pig iron.

The CHAIRMAN. The La Belle Iron Works?

Mr. COLE. They are manufacturers.

The CHAIRMAN. Pickands, Mather & Co.?

Mr. COLE. They are large sellers of iron ore, and also manufacture some.

The CHAIRMAN. The Biwabik Mining Co.?

Mr. COLE. That mine is owned by different concerns.

The CHAIRMAN. I am speaking of the Biwabik Mining Co.

Mr. COLE. The Biwabik Mining Co. is the operating company operating the Biwabik mine. Twenty-five per cent of the ore comes to the United States Steel Corporation, and the balance of it, part is sold in the open market and part of it is utilized by other owners.

The CHAIRMAN. The Shenango Furnace Co.?

Mr. COLE. That is owned by Mr. Snyder and associates at Pittsburgh, and they use nearly all their own ore, and sell some.

The CHAIRMAN. The Meridan Iron Co., operating the Pearce mine?

Mr. COLE. They are consumers, I believe; yes, sir.

The CHAIRMAN. I believe I asked you about the La Belle Iron Works.

Mr. COLE. They are consumers of iron ore.

The CHAIRMAN. The Republic Iron & Steel Co. are consumers, of course?

Mr. COLE. Yes, sir.

The CHAIRMAN. The Pittsburgh Iron Ore Co.?

Mr. COLE. They are consumers.

The CHAIRMAN. The Buffalo & Susquehanna Iron Co.; are they consumers of ore?

Mr. COLE. They have blast furnaces, yes, sir. That is, the people associated with them. They own the stock. This is the mining company operating on that range, and their ores are sent to their blast furnaces, and some are sold.

The CHAIRMAN. The Inland Steel Co.?

Mr. COLE. They are consumers of iron ore.

The CHAIRMAN. The Mahoning Ore & Steel Co.?

Mr. COLE. There are several consumers interested in that property.

The CHAIRMAN. The Hector Iron Co.?

Mr. REED. Is the Chairman reading all the names of the list, or picking them out at random?

The CHAIRMAN. I am taking them as they come.

Now, the Hector Iron Company?

Mr. COLE. I think that is owned by consumers.

The CHAIRMAN. The Ajax Mining Co.?

Mr. Cole. I can not tell you about that.

The Chairman. The Thomas Furnace Co.?

Mr. Cole. They are consumers.

The Chairman. The Cass Mining Co.?

Mr. Cole. I think that is one of Mr. Sellwood's mines. I think they sell the ore.

The Chairman. Swallow & Hopkins—that is mined out, I see; never mind about that.

The New York State Steel Co.; are they consumers?

Mr. Cole. They are consumers, yes, sir. They have been. I think they got into business difficulties some time ago.

The Chairman. The Mariska Iron Co.; are they consumers? They work the Miller prospect. The valuation is just $9,000.

Mr. Cole. It must be pretty small property.

The Chairman. It is. It does not give the tonnage.

The Consumers' Ore Co.; do you know anything about that?

Mr. Cole. That is largely used by blast furnaces.

The Chairman. The Jennings Mines Co.?

Mr. Cole. That is something new, I believe. I am not familiar with it. A good many of these companies have names that I do not know. I may happen to know where the mine is located.

The Chairman. I will give you the mines. The three here are the Helmer and two Jennings mines.

Mr. Cole. That is something new.

The Chairman. Do you know anything about the Spring Mining Co.?

Mr. Cole. No, sir.

The Chairman. The Mayas Mining Co.?

Mr. Cole. I know the people that are interested in that property.

The Chairman. Are they consumers?

Mr. Cole. They are shippers of ore.

The Chairman. The New York State Steel Co.?

Mr. Cole. They are consumers of ore.

The Chairman. The Adriatic Mining Co.?

Mr. Cole. They are shippers of ore. Pickands, Mather & Co., I believe, control it.

The Chairman. The Pitt Mining Co.?

Mr. Cole. They are consumers of ore.

The Chairman. The Pittsburgh Iron Ore Co. I asked you about that, I believe.

Mr. Cole. They are consumers.

The Chairman. The Rogers Iron Mining Co.?

Mr. Cole. I am inclined to think that is owned by Rogers, Brown & Co.

The Chairman. Are they consumers of ore?

Mr. Cole. Yes, sir.

The Chairman. The Nassau Ore Co.?

Mr. Cole. I can not tell you. What mine do they own?

The Chairman. The Nassau mine.

Mr. Cole. I can not tell you.

The Chairman. The Croxton Mining Co.?

Mr. Cole. I believe that is one of Mr. Sellwood's properties.

The Chairman. They sell the ore?

Mr. Cole. They sell ore.

The Chairman. The Bradford Mining Co. They work the Morrow mine. Do you know anything about that?

Mr. COLE. I do not.

The CHAIRMAN. The Mahoning Ore & Steel Co. I asked you about them.

Mr. COLE. Yes.

The CHAIRMAN. Cyprus Mining Co.?

Mr. COLE. That is owned and controlled by Pickands, Mather & Co.

The CHAIRMAN. The Wisconsin Steel Co.; are they consumers?

Mr. COLE. They are consumers of ore.

The CHAIRMAN. The Mora Iron Co.?

Mr. COLE. I do not know who they are.

The CHAIRMAN. They work the Mora prospect.

Mr. COLE. It is some small enterprise.

The CHAIRMAN. You told me about the Consumers' Ore Co.?

Mr. COLE. Yes.

The CHAIRMAN. We are very much obliged to you, Mr. Cole.

Before the committee adjourn, there are some exhibits, I believe, you wanted to put in at the close of the hearing.

Mr. YOUNG. Yes. This paper is a compilation from Crowell and Murray's work, called "The Iron Ores of Lake Superior," published in 1911. It shows the shipments from the different mines in the Lake Superior region for 1910. The mines of the Steel Corporation are arranged under the head of the Oliver Mining Co. The other mines are not arranged by ownership, because the ownership is not stated in Crowell and Murray's book, but they are arranged by the names of the parties who handled the ore from those mines.

As to the Steel Corporation, I think these figures are correct, with the following exceptions to be noted:

The Lake Superior and the Queen mines, in Marquette County, are placed under the heading "Oliver Iron Mining Co.," but that company owns only a three-quarter interest in each of those mines.

On the other hand, the Mahoning and the Biwabik are placed among the independents, and the Steel Corporation owns a one-quarter interest in the Biwabik and a fifth interest in the Mahoning.

I wish it understood these are arranged in this way because this is just the way they appear in the book.

The CHAIRMAN. Mr. Gardner, is there anything you want to put in the hearing?

Mr. GARDNER. No, I do not think so.

Mr. BARTLETT. I would like to put in this publication the Iron-Ore Reserves of Michigan in 1911, by C. K. Leith, being a bulletin published by the Geological Survey.

Mr. YOUNG. I want to say in regard to that report that Mr. C. K. Leith was assistant to Mr. James R. Finley, an extract from whose report to the State tax commission I put in the record. Mr. Leith was his assistant.

The CHAIRMAN. I have here an extract from the testimony of Judge Gary, before the Industrial Commission, beginning with page 986 of the Industrial Commission report, giving an account of the formation and extent of the Federal Steel Co.

Mr. REED. When was that testimony given?

The CHAIRMAN. October 19, 1899. It is just an extract from that report.

Mr. REED. Is this an abstract of his testimony?

The CHAIRMAN. No, it is just an extract from his testimony.

I also have here two sets of tables, showing the plate manufacturers, furnished by Mr. Swank. He agreed to furnish anything of that kind we wanted, if we would not call him. I have several letters from him, which I can put in with the tables.

Also I have a letter from the Secretary of the Reading Iron Co., addressed to Mr. Swank, giving the prices of tubes, under date of March 20, 1912.

Also a letter from Hon. Herbert Knox Smith, in regard to the formation of these various companies, those formed by the Moore's, and those formed by others.

Also some tables furnished by Mr. Swank showing the percentage of movement of ore mined by the Steel Corporation and others, from 1901 to 1910.

Also table of tonnages furnished by the Atchison, Topeka & Santa Fe Railway. Also statement of assessed valuations of the iron mines of St. Louis County, Minn.

Mr. Atkinson when he was on the stand agreed to give us a list of the places reached by the Birmingham Southern Railroad and the industries on it, and I overlooked putting it in the record.

Mr. REED. This is all in evidence.

The CHAIRMAN. Not this.

Mr. REED. I mean that same information corrected up to the time those gentlemen testified about the Birmingham Southern.

The CHAIRMAN. I did not think it was in. I found it in my drawer. If it is already in I will not put it in.

Then, as to the report of Hon. Herbert Knox Smith, we have printed the first volume, and I think it advisable to print the remainder of the report, such as has been published, so that it may all be in the record of the hearing, and be easily and conveniently accessible.

I also have here a compilation prepared by Mr. Woolley. It is a tabulation made from certain manuals, showing concerns in which the directors of the Steel Corporation are directors or officers. It is made up to date, as to the various industrial concerns in which they are directors; the capitalization of them, giving the preferred and the common stock and bonded indebtedness; and so on. This will all appear in the hearing.

The papers, tables, reports, and so forth, referred to above, appear at the end of today's hearing.

The CHAIRMAN. If there is nothing further before the committee, I now declare the committee adjourned sine die.

Thereupon, at 5.30 o'clock p. m., the committee adjourned sine die.

ANNUAL PERCENTAGE OF PRODUCTION BY THE UNITED STATES STEEL CORPORATION FROM 1901 TO 1910.

[Compiled by the American Iron and Steel Association from returns of production made directly to the office of the association.]

The percentage of the Tennessee Coal, Iron & Railroad Co. is included below for 1907, 1908, 1909, and 1910 only. For prior years the production of this company is included with that of the independent companies. The United States Steel Corporation was incorporated on February 25, 1901, and was organized on April 1, 1901. The percentages given for 1901 are obtained by using the figures of production and shipments by the constituent companies of the corporation in the three months of that year prior to their absorption by the corporation and by the corporation for the remaining nine months.

Percentage of total production of leading articles by the United States Steel Corporation.

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Lake Superior shipments of iron ore	61.6	60.4	58.8	53.8	56.0	54.2	54.8	56.0	51.4	51.1
Total production of iron ore	45.1	45.2	43.9	38.0	43.5	43.2	46.4	46.3	45.8	44.4
Total production of coke	41.1	37.5	34.3	36.6	38.0	36.5	33.2	31.4	34.6	32.7
Production of pig iron	43.2	44.8	40.4	44.7	44.2	44.5	44.3	43.5	45.0	43.3
Production of steel ingots and castings	65.7	65.2	63.1	60.7	60.0	57.8	57.1	55.9	55.8	54.3
Production of steel rails	59.8	67.7	64.4	54.3	51.2	50.2	52.2	55.0	57.4	58.8
Production of structural shapes	62.2	57.9	60.3	55.2	54.7	54.6	55.1	47.1	47.1	51.3
Production of plates and sheets	64.6	59.4	59.9	58.1	57.4	56.3	56.2	52.0	49.8	48.0
Production of wire rods	77.6	71.6	73.2	71.3	70.0	71.7	71.5	67.9	69.7	67.3
Production of rolled forms not enumerated above	27.3	31.2	30.1	29.2	31.7	34.7	35.3	32.0	39.4	37.6
Total production of finished rolled iron and steel	50.1	51.3	51.2	47.8	47.4	48.2	48.5	47.1	48.9	48.1
Production of wire nails	65.8	64.9	70.6	67.1	66.1	65.5	66.4	61.2	60.7	55.4
Production of tin plates and terneplates	73.0	73.4	78.3	71.3	71.8	74.5	73.6	69.9	61.9	61.0

PRODUCTION OF THE UNITED STATES STEEL CORPORATION AND INDEPENDENT COMPANIES IN 1902 AND 1910 COMPARED.

[Compiled by the American Iron and Steel Association from returns of production made directly to the office of the association.]

By the phrase "independent companies" we include all the companies outside of the corporation which are engaged in the production of pig iron and finished forms of rolled iron and steel, except that in noting the production of iron ore and coke the phrase "independent companies" includes all the producers of iron ore and coke in the whole country outside of the corporation.

The production of the Tennessee Coal, Iron & Railroad Co. is included below for 1910 only. For 1902 the production of this company is included with that of the independent companies. The United States Steel Corporation was incorporated on February 25, 1901, and was organized on April 1, 1901. In previous statistical compilations relating to the operations of the corporation in 1901 we have used the figures of production and shipments by the constituent companies of the corporation in the three months prior to their absorption by the corporation. The year 1902 is therefore the first full year of its activity in the manufacture of iron and steel.

[Net tons for coke, kegs of 100 pounds for nails, and gross tons for all other products.]

Products.	1902				1910			
	Production and shipments.		Percentage.		Production and shipments.		Percentage.	
	Corporation.	Independents.	Corporation.	Independents.	Corporation.	Independents.	Corporation.	Independents.
Shipments of Lake Superior iron ore	16,659,470	10,926,434	60.4	39.6	22,185,972	21,256,425	51.1	48.9
Total production of iron ore	16,063,179	19,490,956	45.2	54.8	25,245,816	31,643,918	44.4	55.6
Total production of coke	9,521,567	15,880,163	37.5	62.5	13,649,578	28,059,232	32.7	67.3
Production of all kinds of pig iron	7,975,530	9,845,777	44.8	55.2	11,831,398	15,472,169	43.3	56.7
Production of steel ingots and castings	9,750,386	5,196,864	65.2	34.8	14,179,369	11,915,550	54.3	45.7
Production of steel rails	1,992,010	949,411	67.7	32.3	2,138,946	1,496,855	58.8	41.2
Production of structural shapes	753,481	546,845	57.9	42.1	1,163,300	1,103,590	51.3	48.7
Production of plates and sheets	1,583,865	1,081,544	59.4	40.6	2,380,106	2,575,378	48.0	52.0
Production of wire rods	1,126,826	447,467	71.6	28.4	1,508,294	733,536	67.3	32.7
Production of iron rails and other rolled	1,701,700	3,760,967	31.2	68.8	3,203,279	5,317,995	37.6	62.4
Total production of finished rolled forms	7,157,882	6,786,234	51.3	48.7	10,393,925	11,227,354	48.1	51.9
Production of wire nails, kegs	7,122,354	3,859,892	64.9	35.1	7,041,692	5,663,210	55.4	44.6
Production of tin plates and terneplates	264,109	95,891	73.4	26.6	440,694	282,076	61.0	39

PRODUCTION OF THE UNITED STATES STEEL CORPORATION AND INDEPENDENT COMPANIES IN 1902 AND 1910 COMPARED.

[Compiled by the American Iron and Steel Association from returns of production made directly to the office of the association.]

The production of the Tennessee Coal, Iron & Railroad Co. is included for 1910 only. For 1902 the production of this company is included with that of the independent companies. The United States Steel Corporation was incorporated on February 25, 1901, and was organized on April 1, 1901. In previous statistical compilations relating to the operations of the corporation in 1901 we have used the figures of production and shipments by the constituent companies of the corporation in the three months prior to their absorption by the corporation. The year 1902 is therefore the first full year of the corporation's activity in the manufacture of iron and steel.

[Net tons for coke, kegs of 100 pounds for nails, and gross tons for all other products.]

Products.	1902 production.			
	By United States Steel Corporation.	By independent companies.	Corporation over independents.	Independents over corporation.
Iron-ore shipments from Lake Superior, gross tons	16,659,470	10,926,434	5,733,036	
Total production of iron ore........gross tons	16,063,179	19,490,956		3,427,777
Production of coke....................net tons	9,521,567	15,880,163		6,358,596
All kinds of pig iron, including ferroalloys	7,975,530	9,845,777		1,870,247
All kinds of steel ingots and castings	9,750,386	5,196,864	4,553,522	
Bessemer and open-hearth rails	1,992,010	949,411	1,042,599	
Structural shapes	753,481	546,845	206,636	
Plates and sheets, including black plates	1,583,865	1,081,544	502,321	
Wire rods	1,126,826	447,467	679,359	
Merchant bars, iron rails, skelp, nail plate, etc.	1,701,700	3,760,967		2,059,267
Total finished rolled	7,157,882	6,786,234	371,648	
Wire nails.................kegs of 100 pounds	7,122,354	3,859,892	3,262,462	
Tin plates and terneplates..........gross tons	264,109	95,891	168,218	

Products.	1910 production.			
	By United States Steel Corporation.	By independent companies.	Corporation over independents.	Independents over corporation.
Iron-ore shipments from Lake Superior, gross tons	22,185,972	21,256,425	929,547	
Total production of iron ore........gross tons	25,245,816	31,643,918		6,398,102
Production of coke....................net tons	13,649,578	28,059,232		14,409,654
All kinds of pig iron, including ferroalloys	11,831,398	15,472,169		3,640,771
All kinds of steel ingots and castings	14,179,369	11,915,550	2,263,819	
Bessemer and open-hearth rails	2,138,946	1,496,855	642,091	
Structural shapes	1,163,300	1,103,590	59,710	
Plates and sheets, including black plates	2,380,106	2,575,378		195,272
Wire rods	1,508,294	733,536	774,758	
Merchant bars, iron rails, skelp, nail plate, etc.	3,203,279	5,317,995		2,114,716
Total finished rolled	10,393,925	11,227,354		833,429
Wire nails.................kegs of 100 pounds	7,041,692	5,663,210	1,378,482	
Tin plates and terneplates..........gross tons	440,694	282,076	158,618	

The iron ores of Lake Superior.

[Copied from "The Iron Ores of Lake Superior," compiled by Crowell & Murray, chemists and metallurgists, Cleveland, Ohio. Published 1911.]

OLIVER IRON MINING CO., STEEL CORPORATION SUBSIDIARY.

Mine.	Location.	Tons of iron ore shipped, 1910.
Marquette Range:		
Champion	Marquette County, Mich	18,746
Lake Superior (hard)	Marquette County, Mich	271,445
Queen	Marquette County, Mich	230,119
Stegmiller	Marquette County, Mich	48,842
		569,152
Gogebic Range:		
Atlantic	Iron County, Mich	79,847
Norrie-Aurora	Gogebic County, Mich	1,333,006
Puritan	Gogebic County, Mich	50,019
Tilden	Gogebic County, Mich	99,937
		1,562,809
Vermilion Range:		
Pioneer	St. Louis County, Minn	526,436
Savoy	St. Louis County, Minn	59,875
Sibley	St. Louis County, Minn	206,386
Soudan	St. Louis County, Minn	75,511
Zenith	St. Louis County, Minn	283,320
		1,151,527
Menominee Range:		
Aragon	Dickinson County, Mich	241,046
Chapin	Dickinson County, Mich	465,543
Mansfield	Iron County, Mich	114,357
Michigan	Iron County, Mich	17,922
Riverton	Iron County, Mich	84,269
		923,137
Mayville Range: Iron Ridge	Dodge County, Wis	14,487
Mesabi Range:		
Adams	St. Louis County, Minn	1,258,295
Burt	St. Louis County, Minn	1,032,815
Canisteo	Itasca County, Minn	1,105,160
Chisholm	St. Louis County, Minn	634,236
Clark	St. Louis County, Minn	529,222
Duluth	St. Louis County, Minn	57,239
Fayal	St. Louis County, Minn	1,485,099
Genoa	St. Louis County, Minn	283,299
Gilbert	St. Louis County, Minn	110,788
Glen (underground)	St. Louis County, Minn	286,051
Hartley (underground)	St. Louis County, Minn	113,512
Higgins	St. Louis County, Minn	151,854
Hill	Itasca County, Minn	801,088
Holman (open pit)	Itasca County, Minn	413,873
Hull-Rust	St. Louis County, Minn	3,189,975
Leonard	St. Louis County, Minn	987,910
Minnewas	St. Louis County, Minn	963
Morris	St. Louis County, Minn	1,364,673
Sauntry Alpena	St. Louis County, Minn	242,373
Sellers	St. Louis County, Minn	954,042
Spruce	St. Louis County, Minn	613,947
Sweeny	St. Louis County, Minn	769
Virginia	St. Louis County, Minn	985,163
Winifred	St. Louis County, Minn	67,686
		16,670,032
Total shipped, all ranges		20,891,144

The iron ores of Lake Superior—Continued.

M. A. HANNA & CO., CLEVELAND, OHIO.

Mine.	Location.	Tons of iron ore shipped, 1910.
Marquette Range:		
America	Marquette County, Mich	163,290
Cambria	Marquette County, Mich	150,422
Hartford	Marquette County, Mich	183,471
Lillie	Marquette County, Mich	10,121
Republic	Marquette County, Mich	150,732
Richmond	Marquette County, Mich	95,772
		753,808
Gogebic Range:		
Anvil	Gogebic County, Mich	7,235
Newport	Gogebic County, Mich	1,182,324
		1,189,559
Menominee Range:		
Florence	Florence County, Wis	239,161
Hollister	Iron County, Mich	49,434
Loretto	Dickinson County, Mich	116,048
		404,643
Mesabi Range:		
Bessemer	St. Louis County, Minn	117,173
Brunt	St. Louis County, Minn	110,630
Croxton	St. Louis County, Minn	71,632
Forest	Itasca County, Minn	8,264
Hanna	St. Louis County, Minn	308,009
Jordan	St. Louis County, Minn	20,314
Kellog	St. Louis County, Minn	142,906
Kinney	St. Louis County, Minn	401,920
Larkin	St. Louis County, Minn	21,700
La Rue	Itasca County, Minn	128,658
Liley	St. Louis County, Minn	25,404
		1,356,610
Mahoning	St. Louis County, Minn	1,515,723
Mariska	St. Louis County, Minn	23,265
Onondaga	St. Louis County, Minn	61,935
Pettit	St. Louis County, Minn	62,456
Roberts	St. Louis County, Minn	26,915
Silver	St. Louis County, Minn	358,432
Victoria	St. Louis County, Minn	27,592
Wacootah	St. Louis County, Minn	35,498
Wills	St. Louis County, Minn	26,712
		2,138,528
Total tons shipped		5,843,048

E. N. BREITUNG & CO., CLEVELAND, OHIO.

Marquette Range:		
Breitung Hematite	Marquette County, Mich	114,202
Mary Charlotte	Marquette County, Mich	197,522
Washington	Marquette County, Mich	96,769
Total tons shipped		408,593

JONES & LAUGHLIN ORE CO.

Rolling mill	Marquette County, Mich	115,193

R. A. SEELYE, SAULT STE. MARIE, MICH.

Michipcoton Range:		
Helen	Michipcoton, Ontario	115,790

The iron ores of Lake Superior—Continued.

HARMONY IRON CO.

Mine.	Location.	Tons of iron ore shipped, 1910.
Gogebic Range:		
Germania	Iron County, Wis	20,089

PENN. IRON MINING CO.

Menominee Range:		
Cyclops and Norway	Dickinson County, Mich	344,769

THE LAKE ERIE IRON ORE CO., CLEVELAND, OHIO.

Groveland	Dickinson County, Mich	26,462
McDonald	Iron County, Mich	6,022
Youngs	Iron County, Mich	98,399
Total tons shipped		130,883

THE ROGERS, BROWN IRON CO., BUFFALO, N. Y.

Hiawatha	Iron County, Mich	128,884
Munro	Dickinson County, Mich	20,022
Total tons shipped		148,906

OWNER NOT GIVEN.

Lamont	Iron County, Mich	3,183

THE MAYVILLE FURNACE CO.

Mayville Range:		
Mayville	Dodge County, Wis	77,195

THE WISCONSIN STEEL CO.

Mesabi Range:		
Agnew	St. Louis County, Minn	152,834
Hawkins	Itasca County, Minn	244,406
Total tons shipped		397,240

THE ROGERS BROWN IRON CO.

Susquehanna	St. Louis County, Minn	176,869

PITTSBURGH & LAKE ANGELINE IRON CO.

Marquette Range:		
Angeline	Marquette County, Mich	244,923

The iron ores of Lake Superior—Continued.

CLEVELAND CLIFFS IRON CO.

Mine.	Location.	Tons of iron ore shipped, 1910.
Marquette Range:		
Austin	Marquette County, Mich	188,588
Cliff Shaft	Marquette County, Mich	955,374
Imperial	Baraga County, Mich	83,404
Jackson	Marquette County, Mich	40,320
Lake	Marquette County, Mich	244,923
Lucy	Marquette County, Mich	11,257
Maas	Marquette County, Mich	208,103
Moro	Marquette County, Mich	125,430
Negaunee	Marquette County, Mich	348,818
Princeton	Marquette County, Mich	89,441
Salisbury	Marquette County, Mich	85,098
Stephenson	Marquette County, Mich	225,726
		2,606,482
Gogebic Range:		
Ashland	Gogebic County, Mich	231,506
Mesabi Range:		
Crosby	Itasca County, Minn	159,569
Total tons shipped, all ranges		3,097,557

OGLEBAY, NORTON & CO., CLEVELAND, OHIO.

Mine.	Location.	Tons of iron ore shipped, 1910.
Marquette Range:		
Empire	Marquette County, Mich	53,687
Ohio	Baraga County, Mich	23,427
		77,114
Gogebic Range:		
Castile	Gogebic County, Mich	20,197
Eureka	Gogebic County, Mich	41,611
Montreal	Iron County, Wis	187,325
Ottawa	Iron County, Wis	83,389
Yale	Gogebic County, Mich	108,253
		440,775
Moose Mountain Range:		
Moose Mountain	Province of Ontario	72,470
Menominee Range:		
Antoine	Dickinson County, Mich	91,081
Berkshire	Iron County, Mich	97,999
Bristol	Iron County, Mich	270,742
Chatham	Iron County, Mich	51,988
		511,810
Mesabi Range:		
Bray	Itasca County, Minn	57,789
Franklin	St. Louis County, Minn	31,614
		89,403
Total tons shipped all ranges		1,191,572

CORRIGAN, McKINNEY CO., CLEVELAND, OHIO.

Mine.	Location.	Tons of iron ore shipped, 1910.
Gogebic Range:		
Colby	Gogebic County, Mich	194,754
Ironton	Gogebic County, Mich	109,925
		304,679

The iron ores of Lake Superior—Continued.

CORRIGAN, McKINNEY CO., CLEVELAND, OHIO—Continued.

Mine.	Location.	Tons of iron ore shipped, 1910.
Menominee Range:		
Armenia	Iron County, Mich	65,473
Baker	Iron County, Mich	39,417
Dunn	Iron County, Mich	136,144
Genesee	Iron County, Mich	66,185
Great Western	Iron County, Mich	80,709
Quinnesec	Dickinson County, Mich	744
Tobin	Iron County, Mich	235,812
Tully	Iron County, Mich	2,726
		627,210
Mesabi Range:		
Commodore	St. Louis County, Minn	341,548
Stevenson	St. Louis County, Minn	953,079
		1,294,627
Total tons of ore shipped		2,226,516

PICKANDS, MATHER & CO., CLEVELAND, OHIO.

Gogebic Range:		
Brotherton	Gogebic County, Mich	102,626
Cary	Iron County, Wis	205,674
Mikado	Gogebic County, Mich	52,715
Sunday Lake	Gogebic County, Mich	50,019
		411,034
Vermilion Range:		
Section 30	Lake County, Minn	51,650
Menominee Range:		
Baltic	Iron County, Mich	171,930
Caspian	Iron County, Mich	171,334
Fogarty	Iron County, Mich	51,071
Hemlock	Iron County, Mich	115,407
Osana	Iron County, Mich	78,388
Pewabic	Dickinson County, Mich	380,376
Vivian	Dickinson County, Mich	14,827
		983,333
Mesabi Range:		
Adriatic	St. Louis County, Minn	135,685
Bangor	St. Louis County, Minn	17,673
Corsica	St. Louis County, Minn	277,537
Cyprus	St. Louis County, Minn	102,233
Elba	St. Louis County, Minn	186,993
Euclid	St. Louis County, Minn	53,009
Hudson	St. Louis County, Minn	168,553
Maderia	St. Louis County, Minn	83,922
Malta	St. Louis County, Minn	72,035
Minorca	St. Louis County, Minn	66,511
Mohawk	St. Louis County, Minn	123,180
		1,287,321
Pearce	St. Louis County, Minn	60,411
Pearson	Itasca County, Minn	78,133
Perkins	St. Louis County, Minn	80,622
Scranton	St. Louis County, Minn	7,214
Seville	St. Louis County, Minn	2,677
Spring	St. Louis County, Minn	31,909
Troy	St. Louis County, Minn	104,057
Utica	St. Louis County, Minn	232,582
Virginia	St. Louis County, Minn	299,046
Yawkey	St. Louis County, Minn	30,439
		927,090
Total tons of ore shipped		3,700,428

The iron ores of Lake Superior—Continued.

THE TOD-STAMBAUGH CO., CLEVELAND, OHIO.

Mine.	Location.	Tons of iron ore shipped, 1910.
Mesabi Range:		
Biwabik	St. Louis County, Minn	544,353

W. G. POLLOCK, CLEVELAND, OHIO.

Fowler	St. Louis County, Minn	204,040
Grant	St. Louis County, Minn	297,761
Hector	St. Louis County, Minn	82,393
Letonia	St. Louis County, Minn	615,396
Lincoln	St. Louis County, Minn	318,912
Nassau	St. Louis County, Minn	39
Total tons shipped		1,519,141

THE NEW YORK STEEL CO.

Mesabi Range:		
Knox	St. Louis County, Minn	50,942

THE LABELLE IRON WORKS, STEUBENVILLE, OHIO.

Labelle	St. Louis County, Minn	20,349
Miller	St. Louis County, Minn	216,263
Total tons shipped		236,612

INLAND STEEL CO.

Laura	St. Louis County, Minn	189,044

SHENANGO FURNACE CO.

Shenango	St. Louis County, Minn	965,148
Webb	St. Louis County, Minn	46,384
Total tons shipped		1,011,532

Total tons of iron ore shipped by the various companies from the different ranges during the year 1910.

	Tons.	Tons.
Marquette Range:		
Oliver Iron Mining Co	569,152	
Independent companies:		
M. A. Hanna & Co		753,808
E. N. Breitung & Co		408,593
Jones & Laughlin Ore Co		115,193
Pittsburgh & Lake Angeline Co		244,923
Cleveland Cliffs Iron Co		2,606,482
Oglebay, Norton & Co		77,114
		4,206,113

	Tons.	Tons.
Gogebic Range:		
Oliver Iron Mining Co	1,562,809	
Independent companies:		
M. A. Hanna & Co		1,189,559
Harmony Iron Co		20,080
Cleveland Cliffs Iron Co		231,506
Oglebay, Norton & Co		440,775
Corrigan, McKinney Co		304,679
Pickands, Mather & Co		411,034
		2,597,633
Vermilion Range:		
Oliver Iron Mining Co	1,151,527	
Independent companies:		
Pickands, Mather & Co		51,650
Menominee Range:		
Oliver Iron Mining Co	923,137	
Independent companies:		
M. A. Hanna & Co		404,643
Penn. Iron Mining Co		344,760
The Lake Erie Iron Ore Co		130,883
Rogers, Brown Iron Co		148,906
Lamont		3,183
Oglebay, Norton & Co		511,810
Corrigan, McKinney Co		627,210
Pickands, Mather & Co		983,333
		3,154,728
Mayville Range:		
Oliver Iron Mining Co	14,487	
Independent companies:		
Mayville Furnace Co		77,195
Michipcoton Range:		
Independent companies:		
R. A. Seeyle		115,790
Moose Mountain Range:		
Independent companies:		
Oglebay, Norton & Co		72,470
Mesabi Range:		
Oliver Iron Mining Co	16,670,032	
Independent companies:		
M. A. Hanna & Co		3,495,138
Wisconsin Steel Co		397,240
Cleveland Cliffs Iron Co		159,569
Oglebay, Norton & Co		89,403
Corrigan, McKinney Co		1,294,627
Pickands, Mather & Co		2,214,411
Tod-Stambaugh Co		544,353
W. G. Pollock		1,519,141
New York Steel Co		50,942
La Belle Iron Works		236,612
Inland Steel Co		189,046
Shenango Furnace Co		1,011,532
Rogers Brown Iron Co		176,869
		11,378,883
	20,891,144	21,654,462
Total iron ore shipped by Oliver Iron Mining Co., 1910		20,891,144
Total iron ore shipped by independent companies, 1910		21,654,462
Total iron ore shipped by all companies, 1910		42,545,606

Percentage shipped by Oliver Iron Mining Co., 49.10 per cent, in 1910.
Percentage shipped by independent companies, 50.90 per cent, in 1910.

IRON-ORE RESERVES OF MICHIGAN.

By C. K. Leith.

INTRODUCTION.

Early in 1911 the Michigan Legislature directed the State Board of Tax Commissioners to appraise the value of the mining properties of Michigan as a basis for taxation and appropriated a sum of money for that purpose. Mr. J. R. Finlay of New York was appointed appraiser by the tax commission. The writer was asked to estimate

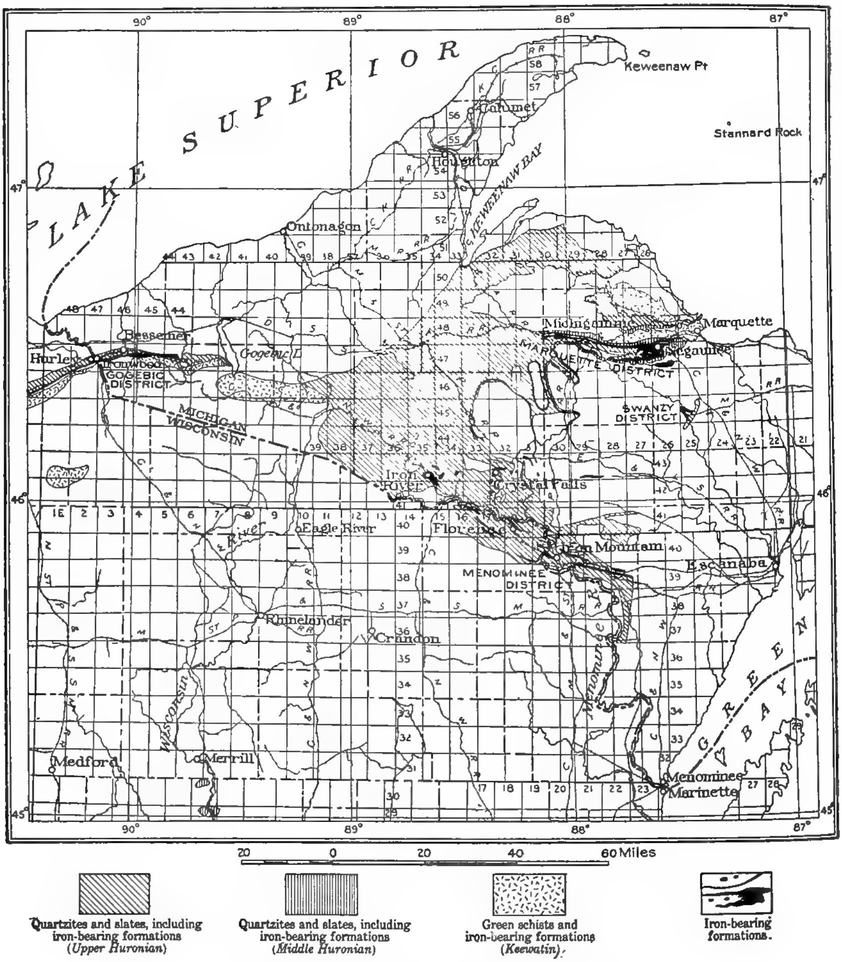

FIGURE 1.—Iron-ore reserves of Michigan in 1911.

the iron-ore reserves, and his estimates were used without substantial modification in the final valuation by the tax commission. His report was not published by the tax commission except as it was quoted in Mr. Finlay's report on appraisal. It would not be desirable to publish the full report, for it contains detailed accounts of the reserves of each mine, but the Michigan Tax Commission has granted permission to publish the summary which is here presented. It is believed that this summary may be of general interest, as it not only shows approximately the physical condition of the ore reserves on August 1, 1911, but indicates the method of estimate and its relations to geologic inference.

Only two months were available for the work of collecting and compiling the data, so that more detailed results could not be obtained and the estimates probably include minor errors. It is believed, however, that the report gives a comprehensive and reasonably accurate account of the Michigan iron-ore reserves. At any rate, it is the first estimate of them that has been attempted.

MICHIGAN IRON-ORE SITUATION.

A broad survey of the Michigan iron-ore situation brings out certain salient facts tabulated below, which are of significance in estimating the ore reserve.

Michigan iron-ore reserves, by districts.[1]

District.	Total area of ore in bottom levels of active mines.	Area of ore developed by drills; vertical projection to surface.[2]	Total area of iron ore in Michigan.	Reserve in mines.
	Sq. feet.	*Sq. feet.*	*Sq. feet.*	*Long tons.*
Menominee	263,465	....	263,465	11,650,450
Crystal Falls	209,730	167,000	376,730	3,682,142
Iron River	1,065,000	984,000	2,049,000	18,297,700
Gogebic	694,000	None.	694,000	31,605,000
Swanzy	....	3,298,000	3,298,000	2,712,737
Soft ore or "hematite," Marquette	1,045,000	7,497,740	8,542,740	37,516,800
Hard-ore mines top of Negaunee formation, Marquette.	350,000	841,065	1,191,065	17,391,335
Mines west of Michigamme	99,000	211,600	310,600	1,742,000
Total	3,726,195	12,999,405	16,725,600	124,598,164

District.	Reserve in [illegible] drilled.	Total reserve.	Total shipment.	Average depth of active mines at lowest developed level.
	Long tons.	*Long tons.*	*Long tons.*	*Feet.*
Menominee	....	11,650,450	42,616,000	1,160
Crystal Falls	1,925,000	5,607,142	15,609,000	1,070
Iron River	9,719,000	28,016,700	6,179,300	445
Gogebic	None.	31,605,000	55,027,691	1,400
Swanzy	4,138,738	6,851,475	2,420,232	....
Soft ore or "hematite," Marquette	25,929,000	63,445,800	....	[3] 690
Hard-ore mines, top of Negaunee formation, Marquette.	2,939,200	20,330,535	96,296,717	[3] 1,041
Mines west of Michigamme	332,000	2,074,000	1,080,000	[3] 220
Total	44,982,938	169,581,102	219,228,940	....

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[1] Low-phosphorus, high-silica mines not tabulated.

[2] The phrase "vertical projection to surface" signifies that the area of dipping and pitching ore bodies is stated in terms of horizontal measurement at the surface—that is, that the structure has been flattened out in making computations.

[3] Not rated according to tonnage of outputs.

One of the most significant features of this table is a comparison of fully developed bottom areas of ore by mines and districts. Only areas that give promise of continuity below have been tabulated. Exhausted or nearly exhausted mines are assigned bottom areas of zero. These figures are not strictly comparable throughout; in other words, each area does not have the same promise of continuity in depth. The notably large size of the areas of the Marquette ores is due partly to the low dip and pitch of the soft-ore bodies which give them great horizontal and small vertical dimensions. Such ore bodies signify future probable development not below but laterally, in the direction of pitch or dip.

Area of ore shown by drilling is not directly comparable to area of ore shown in present bottom-developed levels, for the reason that the drills may cut the ore at many levels, whereas the bottom-mine areas cut the ore at a single level.

If the mined-out portions of the ore bodies lying lateral to the levels estimated were projected to the surface, they would add an area to the area of the present fully developed bottom levels, which would make it more comparable with the area shown by drilling. The aggregate area of ore cut by drilling has been given only to afford a convenient comparison of the exploration in the different districts.

The table assigns no areas nor tonnage to high-silica, low-phosphorus ores of about 40 per cent grade, which have been mined on both the Gogebic and the Marquette ranges. These lean ores are so abundant and grade so imperceptibly into iron formation that no estimate of their tonnage or area has been attempted. In considering the table, however, they should be taken into account as adding a considerable reserve, which would tend to bring the total ascertained reserve more nearly to the present total shipment from the region.

The probabilities of extension in every district but the Menominee are so strong that it is safe to estimate that for many years the ratio of reserve to total shipment will be maintained—in other words, that as much ore will be discovered yearly as is mined yearly. In fact, to-day the reserve probably bears a larger ratio to the total shipment than at any time in the past, and the possibilities of developing more ore are so great that 10 years from now there will probably be greater reserve in proportion to shipment than now. The increasing tendency of the larger interests to make sure their ore supply for years in advance is leading to the development of increasingly large reserves in proportion to past shipment. Enough facts might be cited in relation to individual mines, explorations, and ranges to show that this forecast of the future is not based on vague surmise. Large extensions, both vertical and areal, are inevitable. Probably not more than 10 per cent of the area of the upper Huronian slates of the Crystal Falls, Menominee, Iron River, and adjacent areas has been explored. Iron formation lenses are likely to be found almost anywhere in these slates. The heavy drift covering will make their discovery a slow and costly process.

The total known area of iron formation is 29,267 acres. In addition, there are fully 20,000 acres of magnetic belt in which exploration has scarcely more than begun. Probably half of this total acreage is iron formation of grade and character that will afford workable bodies of iron ore. The total area of iron ore in Michigan projected vertically to the surface is at present known to be at least 383 acres, or 1.31 per cent of the area of total known iron formation. This area does not include many abandoned mines or worked out portions of mines that lie lateral to present surfaces of ore. If these were taken into account, the total surface area of vertical projection of all ore bodies, present and past, would be considerably larger. Future discoveries are certain to increase this area still further. Therefore the average chance of finding ore in iron formation is larger by a considerable but at present unknown ratio than the percentage 1.31 given above. This figure does not necessarily indicate that only 1.31 per cent of the 40-acre tracts carry ore, for the ore is so distributed that it includes or touches a much larger proportion of the tracts.

The conclusion therefore is that at no time in the past has the outlook for long life for Michigan iron ores been any better assured than it is now. There are few regions in which expenditures of money for large explorations can yield more certain results. The future size of the reserve will be in more or less direct ratio to the money expended in exploration. There is yet no indication of diminishing returns from exploration. In fact, increased knowledge of the geologic conditions is bringing more certain results for a given expenditure of money. The reserve will cease to grow only when difficulties of exploration or outside economic influences begin to limit the amount of exploration.

This table shows the essential relative standing of the different ranges. The Marquette stands easily first in present tonnage and in future promise. The Iron River and the Gogebic are in nearly the same rank so far as present tonnage is concerned. The Menominee district has evidently seen its best days.

The present estimates of probable ore are limited by certain conventions, described elsewhere, which bring the total reserve to a figure below the total past shipment of iron ore from Michigan. There can be no reasonable doubt, however, that the reserve of iron ore, developed and probably available, approximates the total past shipment. This statement is true for all the ranges except the Menominee, and the shortage in the Menominee is more than offset by the great promise of the adjacent Crystal Falls and Iron River districts.

METHODS USED IN MAKING ESTIMATES.

MINES.

Most of the estimates received from the mines cover ore actually developed above the bottom levels. Some include, as probable ore, the extensions of partly developed levels. One company adds as probable ore an arbitrary unit of 2,000 tons where the breast of the drift is in ore. Others have added as probable ore all the ground from 10 to 200 feet below the bottom level, where the continuity of the deposits above and the geologic conditions indicate that the ore is likely to have somewhat the same persistence below that it has above. Where drill holes have shown ore that lies in advance of or below present workings and undoubtedly in the extension of the same deposit, the estimate of probable ore has been extended to include these holes.

It is obvious that if the estimates turned in were accepted as they stand, the reserves would not be treated in the same manner throughout, and that companies which used the more liberal methods of estimating would be at a disadvantage as compared with other companies. It has, therefore, been found desirable to formulate a convention to be applied, so far as seems reasonable, to all estimates. The convention is this: Estimates of developed ore are practically accepted as turned in. Estimates of probable ore are modified to include for each mine at least one full level below present workings, with area equivalent to the average of the lowest fully developed levels. Also, partly developed levels are extended to the dimensions of the nearest fully developed levels. Where drill holes show ore in advance or below and within reasonable distance of the workings, this ore is added. Where the ore body is actually exhausted or the geologic conditions show a strong probability of the exhaustion or narrowing of the ore body below, this convention has been modified accordingly. In applying this convention to each property there have been taken into consideration the total shipment of the mine, the persistence of the ore body, the depth, the comparison of the areas of the lower levels with the average of the levels above, and the geologic conditions. It is possible that this method of estimate gives to a few properties a little more ore than the mining company is willing to concede as a part of its probable reserve, but it is believed that these properties are extremely few; in fact, none are known. For most properties the probability is that the ore body is really much more extensive than has been estimated.

PROBABLE ORE SHOWN BY DRILLING.

Ore cut by drilling has been treated in a still more varied fashion in the estimates received. Certain companies have merely turned in records of drill holes without attempting to estimate the ore. Others have turned in a lump estimate—generally moderate. Others have given an estimate of the ore within a radius ranging from 25 to 100 feet of each hole, and have made no attempt to connect holes. Others have drawn around each hole a circle having a radius of 50 to 100 feet, according to the thickness of the ore cut in the hole, and have then connected by straight lines the peripheries of the circles drawn around adjacent holes on the assumption that ore lies continuously between them. Others have treated the holes as means of showing cross sections of a continuous ore body and have connected the ore between sections, making no allowance for extensions beyond limiting holes. Still others have allowed extensions of 50 feet beyond limiting holes. One company estimates its extensions beyond limiting holes to the point of a triangle distant one-third of the thickness of the ore shown in these limiting holes.

The possible variation in reasonable inference from drill holes is clearly much greater than that from mine workings. It has not been found desirable to use the same convention throughout in estimating from drill holes, but the geologic conditions and the probabilities of connection of ore shown in different areas have been considered in determining a reasonable method of estimate for each property. Where the proximity of the holes to one another and the geologic conditions indicate a reasonable certainty of continuous ore between holes, the limiting holes have been connected by straight lines and the area between them has been rated as showing a thickness of ore equal to the average of that cut by the adjoining holes. Allowance is made for irregular spacing of holes in estimating average thickness. Where the ore body has a steep dip or where holes cut it at an angle, due allowance is also made. Where the holes are so scattered that it seems unsafe to connect the holes through so large an area, they have been connected in small groups and the area is estimated in the same fashion. As a rule, no allowance has been made for ore estimated by the companies to extend beyond limiting holes, and these exclusions should counterbalance possible errors made by including too large areas between holes. Where the holes are so distributed in linear fashion as to make it difficult to connect the corresponding areas, the method used by certain companies has generally been followed. This method gives the limiting holes a radius up to 75 feet, according to the thickness of the ore cut in the hole, and then connects by straight lines the peripheries of the circles of the limiting holes so circumscribed.

Of course, no possible method will bring the estimates of drilling to a single standard or degree of probability, for the geologic conditions shown by the different ore bodies are extremely diverse. The method used, however, is so conservative that it can do no property substantial injustice, and it is practically certain that in most localities the quantity of ore present is far greater than that shown by the estimates.

DEDUCTION FOR MINING LOSS AND ROCK.

Certain companies have made uniform deductions of 20 per cent for mining loss and rock in their estimates and have reported only the available ore in their reserves. For certain localities, where the nature or location of the surface is adverse, still greater deductions have been made. Other companies, and these include the majority, made no deduction for mining loss and rock. The variation in estimates due to differing treatment of these losses is not so great, especially between similar properties, as the difference in the treatment of these losses by different mining companies would indicate. It is probable that some of the company estimates make allowance for these losses even though it is not so stated. The estimates are made in so many ways and the variations in other features have been so great that in making deductions for mining loss and rock, each of the companies has been considered individually. In general, the estimates made from drilling are reduced.

NUMBER OF CUBIC FEET PER TON USED IN ESTIMATES.

The estimates turned in range from 7 to 18 cubic feet of ore per ton, the figure depending on the grade and texture of the ore, on varying judgment as to the right figure, and on conventions which certain of the companies have arbitrarily used for all their ores. One company computed 18 cubic feet of ore per ton; another company, mining almost exactly the same kind of ore, computed 10 cubic feet. Careful tests of the cubic contents of the ores from the different grades and textures have been made by the Oliver Co., the Cleveland Cliffs Co., and others. They show an average of 8 cubic feet per ton for the hard ores, 12 cubic feet for the soft ores, and 13 or 14 cubic feet for low-grade ores. The Oliver Co. used 10 cubic feet per ton throughout in its estimates as a convenient convention, on the assumption that the error in this figure is considerably less than the error in the assumptions as to dimensions of ore bodies. The figures taken as a standard for each district seem to correspond to the average usage for that district. These figures are as follows:

Cubic feet per ton of iron ores of Michigan.

Marquette hard ores	8
Menominee ores and Gogebic ores	10
Soft ores of the Marquette, Crystal Falls, and Iron River districts	12
Low-grade high-silica ores	14

Company estimates have not been recalculated to this basis, unless the figure used by the company is considerably too large or too small. It has seemed desirable to allow some variation in this regard, for the operators of most of the companies have formed a pretty definite idea how their ore has run, and even for mines whose figure is probably 1 or 2 cubic feet per ton larger or smaller than it should be, this error is offset by larger errors in assumptions as to dimensions or in deductions for rock or mining loss.

TIME AT WHICH ESTIMATES WERE MADE BY COMPANIES.

Because of difference in time in making their own annual estimates, or because their records are not up to date, and because in part of misunderstanding, the companies have dated their estimates all the way from January 1 to July 1, 1911. The reports have been so late in coming in that it has not been possible to revise them to a uniform date, but this fact has been taken into consideration in making the estimates. To illustrate, one company may have turned in its estimates since January 1, 1911, but, on the other hand, its method of making estimates from drill data may be so liberal as to compensate for the omission of late discoveries.

COMPARISON OF ESTIMATES BY APPRAISER AND BY COMPANIES.

The appraiser's estimate has added 25 per cent to the total tonnage reported by the mining companies. This was the net result of the use of all the factors mentioned.

CLASSIFICATION AND DISTRIBUTION OF IRON LANDS.

The following table shows the distribution by counties of the known iron formation and magnetic belts, measured by 40-acre tracts and also calculated from planimeter measurements. In these 40-acre tracts an area about twice as large as the actual iron land is included. The iron lands are roughly grouped in classes. Lands of class A are known to be favorably located for exploration; in lands of class B the geologic conditions are doubtful, but the lands will probably be explored more or less in the future; lands of class C are magnetic belts or lands of lean or unfavorable iron formation, in which the chances for ore are remote or entirely unknown.

Classification and distinction of iron lands in Michigan by counties, in acres.

County.	Measured by 40-acre tracts.				Determined by actual planimeter measurement of areas.		
	Class A.	Class B.	Class C.	Total.	Iron formation.	Magnetic belt.	Total iron formation and magnetic belt.
Dickinson	11,040	4,000	6,440	21,480	4,226	3,095	7.321
Marquette	34,960	8,880	....	43,840	16,810	2,847	19,657
Gogebic	6,720	1,720	2,320	10,760	5,449	496	5,945
Iron	11,040	10,760	4.840	26,640	1,972	12,702	14,674
Baraga	3,160	....	....	3,160	810	1,841	2,651
Total	66,920	25.360	13,600	105,880	29.267	20,981	50,248

THE GOGEBIC DISTRICT.

A part of the iron ores of the Gogebic district occurs in tabular bodies that lie parallel to the bedding and a part occurs in great widenings of these bodies at the intersection of dikes with footwall quartzite or slate. The line of intersection of the dikes with the footwalls in general pitches to the east, although in some places the pitch is to the west and in others this line is horizontal. It was formerly supposed that the upper dikes limited the ore bodies below, but it is now known that the ore bodies may be repeated on dike below dike, and to-day no one is willing to predict the depth to which this repetition may be carried. The ore body at the intersection of dike and footwall on one property may pitch on another property at considerable depth and may go still beyond to depths not yet touched by exploration.

The total area of fully developed bottom levels in the district is 876,000 square feet. This estimate, however, must be modified before it can be used in forecasting the future production of the district, for ore bodies pitch from one property to another, and therefore, in adding the bottom levels of the two properties, what is really a single ore body is considered twice—as, for instance, in the Pabst and the Newport bottom areas. In estimating the future output of the district the largest deductions to be made are those arising from duplication of areas in the Pabst and Newport and in the Pabst and

Aurora ore bodies, which are probably the same ore shoot. Deduction for these ore bodies will give a total area for the district of 694,000 square feet. The areas of bottom levels of other mines probably include some duplication, but this is not nearly so certain, and they are so far separated as to allow for each mine a considerable projection below.

It is estimated that the total area of ore in all average levels is to the total area of ore of all present bottom levels as 100 is to 118. If old mines that have been exhausted or abandoned are included in the estimate, the total area of the present bottom level is 5 per cent greater than the average total area of upper levels.

The total shipment from the Michigan portion of the district has been 55,027,691 long tons. The total reserve is 17,298,000 long tons above bottom levels and 14,307,000 tons more below, or 31,605,000 tons of reserve in all. Drilling has disclosed not many new ore bodies in this district, and the reserve for the mines covers practically all the known reserve. At the present rate of shipment—3,664,594 tons in 1910—this reserve will last about 8.6 years, but further extensions are probable. The average depth of the lowest developed level, rated according to output, is 1,400 feet.

It is obvious that possible further extensions of ore bodies in depth—extensions not here considered—may necessitate a great increase in the estimated quantity of available reserves. It has recently been discovered that the ore bodies in the hanging-wall slates are much more extensive than had been suspected, and the possible development at this horizon is large.

THE IRON RIVER DISTRICT.

The ores of the Iron River district occur in closely folded upper Huronian slates. The iron formation lenses in which the ores occur are uniformly of steep dip. In a large way they have a distinct linear trend, but almost every lens shows major and minor buckles and considerable widening or narrowing of the formation. The walls of the ore body may be all slate, all jasper, or any combination of the two. The larger ore bodies occur in places where the formation has been thickened by folding. The axes of these folds are favorable places for the concentration of ore. They have steep pitch and the ore bodies they contain should have great persistence in depth—in fact, underground development and drilling have already shown that they extend to great depths. As would be expected under these conditions, individual ore bodies are extremely irregular in outline, though in a large way they may conform to the major trend of the district. The principal ore zone of the district is contiguous to the valley of Iron River, extending from the Zimmerman mine northward to the town of Iron River. From this valley the ore-bearing zone sends a branch northeastward through the Baker-Tully, Blair, Munro, and Erickson mines, and possibly thence to the Chicagoan mine. Another and as yet independent area runs east and west through the Osana, Davidson, and Bates properties, which lie north of the Iron River. Throughout these areas nearly every 40-acre tract that carries iron formation shows some ore. The underground developments are shallow; the deepest mine is 690 feet deep and the average depth is about 445 feet, but drilling has shown that the ore goes down to 1,712 feet.

The total area of the bottom levels of the mines which have not been exhausted or abandoned is 1,065,000 square feet. The average depth of these bottom levels, rated according to tonnage of ore taken out above them, is 445 feet. The total shipment from these mines has been 6,179,300 tons and the reserve reported above the lowest levels is about 8,668,700 tons, so that the total ore taken out or left above these levels is 14,848,000 tons. As the cubic measure of this ore and its average depth are known, it may be calculated, due allowance being made for overburden, that the average ore areas of the levels above the present bottom levels have been smaller than the ore areas of the present bottom levels by 55 per cent.

These figures do not closely apply to any one property for the reason that they include new ore bodies from which the past shipment has been small. Correction can be made for this factor by rating the present bottom areas in proportion to the ore shipped from above them. The figures given apply only to those mines that have shipped 87 per cent of the total output of the district. The remaining 13 per cent of the output has come from mines that have been exhausted and abandoned. When corrections have been made for these mines it appears that the average levels for all mines that have shipped ore are 63 per cent smaller than the present lower levels. Although geologic conditions make it necessary to consider each mine separately, this general average gives a reasonable expectation for the yield of the district as a whole, to which the yield of individual mines may be expected to approximate.

If the mines maintain their present bottom levels to the depth of the deepest developed level in the district—690 feet—180 feet (probably too much) being allowed for drift, the output to be expected will be 30,242,250 tons. If the mines maintain their area to the greatest depth shown by drilling—1,712 feet—the total output for the district will be 112,500,000 tons. If the mines be supposed to come to a point at the greatest depth shown by drilling, their yield will be 56,223,000 tons.

These approximations are based principally on developed or partly developed mines. Extensive explorations by drilling show an additional minimum area of 984,000 square feet of ore. This is the area of ore projected to the surface, and a moderate estimate of the ore it represents is 9,719,000 tons. Although some of the older mines may soon become exhausted, their exhaustion will be much more than offset by the development of ore bodies now known only by drilling, so that for some years to come the total area of known iron ore in this district will increase rather than decrease.

A comparison of the total area of ore disclosed in this district by underground development and by drilling with that in other Michigan ore districts, shows that the Iron River district ranks next below the Gogebic in quantity of available ore. On the other hand, it is at a disadvantage as compared with the Menominee, Gogebic, and Marquette districts, in that its ore is, on the whole, of lower grade and less desirable.

The total shipment from this district thus far has been 6,179,300 tons. The reserve reported from mines above lowest level is 8,668,700 tons, the reserve estimated below the lowest levels is 9,629,000 tons, and that estimated from exploration is 9,719,000 tons, a total reserve of 28,016,700 tons. At the present rate of production, if no more ore is discovered, the district can be counted on to produce from known ore bodies for about 22 years. However, when we remember how small a portion of the area has been explored and the enormous possibilities of extension of these ores in depth, it appears that the life of the district will be indefinitely extended.

THE CRYSTAL FALLS DISTRICT.

The ores in the Crystal Falls district are in upper Huronian slates (Michigamme) except the ore of the Mansfield mine, which is in a band of slates in the Hemlock formation (basic volcanic), and the Groveland mine, which lies at the base of the upper Huronian. In the Crystal Falls district, as in the Iron River district, the iron formation lenses are steeply tilted, much folded, and show great variation in thickness. The walls may be slate or jasper or any combination of the two. The larger ore bodies occur in folds in the iron formation which have thickened the formation. The pitch of these folds has considerable persistence in depth. Nearly every 40-acre tract in the producing part of the district that carries iron formation contains some iron ore.

The total bottom area of mines that have not been exhausted or abandoned is 209,730 square feet. The average depth of these levels, rated according to tonnage, is 1,070 feet. The total shipment from these mines and the reserve still left above the bottom levels aggregate 17,266,142 tons, of which 1,925,000 tons is reserve above the lowest developed level. If the cubic measure per ton of the ore included in this total of shipment and reserve is estimated at 12 cubic feet, and the product is divided by the average depth, it appears that the average area in the past has been 195,700 square feet. The total bottom area includes some areas from which little ore has been shipped and does not include some areas from which ore has been shipped from exhausted or abandoned mines. After introducing corrections by rating areas according to tonnage shipped, it appears that for the average mine the present bottom level is about the same as the average of the levels above. This fact should have some application to individual mines, although geologic conditions require the separate consideration of each property.

In addition to the ore shown by mines, 167,000 square feet of ore are shown by drilling, which at a moderate estimate should yield 1,412,000 tons. The 167,000 square feet is the area of drilled ore bodies projected to the surface. As the old mines become exhausted these ores will come in to maintain the reserve of the district. The total shipment of the district has been 15,609,000 tons; the total reserve now in sight from mining and drilling is 5,607,142 tons. At the present rate of production the life of the district would be 4.05 years, if no more ore were discovered, but future discoveries by drilling may disclose much more ore, for only a small percentage of the upper Huronian slates has been drilled.

If the mines maintain continuous production at their present levels and carry these levels to a depth equal to that of the Dunn, the deepest mine now worked in the district, the reserve between this depth (1,327 feet) and the average level (1,070 feet) would be 4,475,000 tons.

THE MENOMINEE DISTRICT.

The total area of ore on fully developed bottom levels of the Menominee district, in which the ore is not known to be cut off by rock or to pitch off the property within a limited distance, is 263,465 square feet. The average depth of these bottom levels, rated according to quantity of ore that has been shipped from the mine, is 1,160 feet. If the ore shown in bottom levels continues with present areas to the depth of the deepest known ore, the probable ore in the district would be 6,320,000 tons. However, if the total area of the lowest levels is 263,465 square feet, if the average depth of these levels is 1,160 feet, and if the total ore shipped from mines not yet bottomed and in reserve above this average level is 41,000,000 tons, it may be calculated that the average area of levels above present bottom levels has been 354,900 square feet, or 34 per cent greater than present bottom levels. These figures are derived from a consideration of mines that have made 80 per cent of the total shipments. The remaining 20 per cent of the shipments came principally from mines like the Pewabic, which is bottomed. On correcting for such mines it appears that the average upper levels have been 36 per cent greater than the present bottom levels. These facts indicate a diminution of total area with depth for the district as a whole, which would prevent the assumption that the ores below present bottom levels will maintain the same total area below. If the total area decreases below in the same ratio that it has decreased from the surface down, the probable quantity of ore lying between present bottom levels and present maximum depth would be about 5,770,000 tons. The total reserve above bottom levels is 9,083,450 tons, the total below is 2,567,000 tons, and the total for both is 11,650,450 tons. The total shipment for the mines considered is 42,616,000 tons.

A part of the ore occurs in tabular bodies parallel to the bedding and a part in more or less well-developed pitching folds bottomed by dolomite, talc, schist, or slate, and the ore deposits in these folds are therefore elongated in the direction of the pitch. The degree to which the ore is confined to these pitches varies in different mines and in different parts of the same mine, the pitches being less well developed near the surface than below. The folds unquestionably pitch a long distance below the present bottom levels, and there seems to be nothing in the character of the rock or its alterations or other features at the bottom levels to show why the ore, at least that in shallower mines, should not continue on these pitches to as great a distance below the surface as that which has been reached by the deepest mines in the district, and probably to even greater depths.

THE MARQUETTE DISTRICT.

KINDS AND QUANTITY OF ORE.

The ores of the Marquette district occur in several grades and under diverse structural conditions, and they will therefore be considered in separate groups, as follows: (1) The soft ore of the mines of the upper Huronian slates east of Michigamme; (2) the ore of the mines west of Michigamme; (3) the hard ore of the mines at the top of the Negaunee formation; (4) the soft ore of the "hematite" mines within the Negaunee or near its base, principally in the vicinity of Negaunee and Ishpeming; (5) Swanzy; (6) the hard, siliceous, low-phosphorus ores from the Marquette and Menominee districts.

The total area of the bottom levels of the mines of the entire Marquette district, exclusive of the Swanzy, which have not been exhausted or abandoned, is 1,494,000 square feet. The reserves of the mines are 59,362,872 tons. In this district, including the Swanzy, there have been extensive explorations by drilling, the results of which when added show a total area in ore of about 13,342,405 square feet. The large size of this drilled area is due partly to low dip—it is the area of the ore projected to the surface, and a moderate estimate fixes the quantity of the ore at 33,338,938 tons. This estimate is obtained after deducting 20 per cent for mining loss.

A comparison of the total area of ore disclosed in this district by underground development and by drilling with that in other Michigan ore districts shows that the Marquette district ranks first in available resources of iron ores.

SOFT ORES IN THE UPPER HURONIAN SLATES EAST OF MICHIGAMME.

A group of mines in the upper slate area—the Bessie, the Phoenix, the Northampton, and others—has produced a low-grade limonite in small quantities. The total shipments from this group have aggregated 118,200 tons. The ores are very much folded. The ore bodies are small and irregular, and the chance of profitable operation does not seem to be good. All these mines have been closed down for some time.

ORES OF MINES WEST OF MICHIGAMME.

A group of mines have been recently developed in the upper Huronian rocks, south of the quartzite. In general, these have a monoclinal dip to the south and promise considerable extension in depth. The total area of fully developed bottom levels here is 99,000 square feet.

The average depth of producing mines, not rated according to tonnage, is 220 feet. The shipment from these mines has aggregated 1,080,000 tons. Drilling has shown considerable extensions of the ore on the Imperial mine. The reserves of the mines in this district are 1,742,000 tons.

Explorations by drilling in this district show an area in ore projected to the surface of about 211,600 square feet, or 332,000 tons, after a deduction of 20 per cent for mining loss and rock. The ore is soft, low-grade hematite, which is estimated at 14 cubic feet per ton.

HARD ORE MINED AT THE TOP OF THE NEGAUNEE FORMATION.

The ores at the top of the Negaunee formation, just beneath the Goodrich quartzite, are in general hard hematites, locally more or less specular and magnetic. In certain of the mines the basal conglomerate of the upper Huronian, which rests against these ores, is also sufficiently rich in ore to be mined and constitutes a part of the ore bodies. The ore bodies are tabular in shape and lie parallel to a steeply dipping contact of the Negaunee and the Goodrich quartzite, though they are locally folded and faulted. Some of them show a lateral pitch in the plane of contact. Soft hematite is locally found in these mines in the jasper footwall. In Section 16 mine the hematite and the hard ore have come together on the bottom level, and the soft ore is becoming relatively more abundant.

The aggregate of bottom levels of such of these mines as have not been exhausted is 350,000 square feet. The average depth of producing mines, not rated according to tonnage, is 1,041 feet. These ores have been mined to a depth of 1,984 feet at Champion, and this group of mines as a whole constitutes the deepest of the Marquette mines. The persistence of these ore bodies to the present levels affords good promise for still further persistence in depth. The reserves of the mines in this district are 17,391,335 tons.

Drilling at several points, notably under the city of Ishpeming and in the North Lake area, has shown additional ore not yet opened by mining. The estimated quantity of ore disclosed by this drilling is 2,939,200 tons.

It underlies an area of approximately 841,065 square feet. Further profitable explorations at this horizon are still possible. It is clear, therefore, that the hard-ore production may be expected to continue at the present rate for many years.

SOFT ORE OF THE "HEMATITE" MINES.

The mines working on the soft "hematite" ore are located within the Negaunee formation in beds at its middle and lower horizons. Ordinarily they are not connected with the hard-ore deposits at the horizon at the top of the Negaunee, but in Section 16 mine ores of the two types come together. The soft ores are, as their name indicates, soft in texture, are somewhat more hydrous than the hard ores, and will run about 12 cubic feet to the ton. The ore bodies show great variety of shape. In the Negaunee Basin the ore body is a gently folded and faulted sheet having a comparatively low pitch to the south of west. In the Prince of Wales, Breitung No. 2, Mary Charlotte, Rolling Mill, and Cambria-Hartford areas the tabular development is much less marked, the ore occurring in more or less shallow channel-like runs in jasper. The ore bodies have relatively low pitch and great local irregularities and are cut by dikes. In the Lake Angeline area the ores lie in sharp troughs in greenstone. The bottoms of these troughs have relatively low pitch.

The average depth of the producing mines is 690 feet. This figure is not determined by rating depths of individual mines in proportion to content of ore, and therefore is not so accurate as the figures showing the depths of mines in other districts. The aggregate shipment of ore of this class has not been calculated, many of the older records being faulty.

The aggregate total area of bottom levels of the mines of this group is about 1,045,000 square feet, but as the ore bodies have in general a low pitch this aggregate area can not be fairly compared with the areas of the hard-ore mines in this district, or with the areas of ores in the Menominee, Crystal Falls, Iron River, and Gogebic districts, where the pitch is steeper or where the vertical element is dominant. The area of a section across the pitch would be more closely correlative. The projection of present bottom levels downward along the pitch would carry some of the flat-lying deposits off the property. It is apparent that owing to flatness of pitch the areas or cross sections in many adjacent properties are duplicated, the same ore body running through both properties and being cut at different elevations. So far as data have been available the estimate for total area has been corrected by subtracting for duplication or by making allowance for the flatness of the pitch. The area, 750,000 square feet, represents approximately the same kind of promise for the ground below the present bottom levels in this group of mines that would be represented by the aggregate bottom areas given for the other ranges. The reserves of the mines of this district are 37,516,800 tons.

Drilling to the soft-ore horizon has disclosed a vast amount of ore, which will not be exhausted for many years. This drilling has revealed most notable resources in the area bounded on the north and west by the Maas-Negaunee and Cambria mines and on the southeast by the Mary Charlotte and the Rolling Mill. Nearly every 40-acre tract in this area has either shown ore or lies in such relation to ore bodies discovered as to indicate strongly the probability that it contains ore. The ore has been cut to a maximum depth of 2,375 feet. The pitch is in general to the west or southwest, and no one can yet say what the limit in these directions will be. The estimated available ore shown by drilling is about 25,929,000 tons. It underlies an area of about 7,497,740 square feet. The quantity of ore developed by drilling in this area will more than maintain the present shipment of the soft-ore mines for an indefinite period, and the probability of further discovery by drilling is so great that the reserve of this class of ores in the future may be far greater than it has been in the past.

ORES OF THE SWANZY DISTRICT.

The Swanzy district, which lies southeast of the Marquette district, occupies an isolated canoe-shaped basin in upper Huronian rocks nearly if not quite surrounded by granites. The axis of the basin extends northwest-southeast, with minor cross folding. The dips are gentle, except where cross folded. The granite basement is irregular. The iron formation may rest directly upon granite basement or may be separated from it by arkose or graywacke. The overlying rock is slate. The ore is relatively thin at the horizon near the base of the iron formation. The ore bodies lie principally on the northeast side of the basin and at the ends. One known ore body, the Stephenson, is on the west side of the basin. The ores occur in tabular deposits that have gentle pitch. They have been thoroughly explored by drilling, and the total tonnage of the basin is reasonably well estimated. The Cleveland Cliffs Co. has drilled 81 holes in ore. The total shipment from this basin has been 2,420,232 tons. The total available reserve determined from mining and drilling operations, after deductions have been made for non-recoverable ore, is 6,851,475 tons. The shipment from the district in 1910 was 552,597 tons. This district may, therefore, be expected to maintain its present rate of production for 12.4 years. The total area underlain by ore is at least 3,298,000 square feet. The average thickness of the ore, as shown by drilling, is 41.7 feet.

HARD, SILICEOUS, LOW-PHOSPHORUS ORES OF THE MARQUETTE AND MENOMINEE DISTRICTS.

In the discussion of the ore reserves of the Menominee and Marquette districts no account was taken of a number of mines that produce ore of about 40 per cent grade, high in silica and low in phosphorus, used principally for mixtures. The iron content of these ores is but little greater than the average content of iron in the adjacent iron formation. They are mined in part by open cuts and by milling, and in part by underground workings. Their mining at any particular locality depends on conditions favorable for mining, on unusually low phosphorus content, on the possession of an assured market, and, as with the Pewabic and other mines, on the low cost of handling ore of this grade along with ores of higher grade which are being hoisted. So far as is known, most of the mines that have produced ore of this grade can produce it far in the future, and an estimate of the minable quantity of this ore would be of little significance. In the Palmer area, for instance, an estimate of the quantity of such ore would show enormous resources, but the limits of the ore are so indefinite that an estimate would be difficult. It should not be assumed, however, that unlimited quantities of these ores are available. It is true that there is an enormous quantity of ore carrying 40 per cent of metallic iron, but the areas where the phosphorus is exceptionally low and where the conditions allow cheap mining are comparatively small.

EXTRACTS FROM THE TESTIMONY OF JUDGE E. H. GARY, OCTOBER 19, 1899.

[Vol. I, Report of Industrial Commission, p. 986.]

Q. Was it an original purchase when this Federal Steel Co. got the stock of all these companies, or the properties of all these companies?—A. No; the Federal Steel Co. made an arrangement with J. P. Morgan & Co. whereby J. P. Morgan & Co. agreed on their part to deliver to the Federal Steel Co. the stock, or the majority of the capital stock, of these different companies on a certain basis, and the Federal Steel Co. on its part agreed when the stock was delivered to give in exchange for it the stock of the Federal Steel Co. Now, perhaps in that connection I could make a little plainer what Mr. Stetson intended to say if you care to have me. Perhaps I am more familiar with the transaction than he is in some respects. Mr. Stetson was the counsel of J. P. Morgan & Co., and they were the managers of a syndicate so called. I am not quite so familiar with that branch of the business as Mr. Stetson, but I am more familiar with the value of these properties which the Federal Steel Co. was interested in. The Federal Steel Co. has an authorized stock of $200,000,000—$100,000,000 preferred and $100,000,000 common. The amount of capital stock actually issued is about $53,000,000 of preferred stock and about $46,000,000 of common stock, making about $99,000,000 issued—a little more than that, but not quite $100,000,000. The actual book value of the plants and properties, not including the cash, of these constituent companies was about $45,000,000; the cash on hand which these companies had was about $10,000,000, making $55,000,000. There was an increase in the value of these properties, being largely in lands, amounting to about $30,000,000—a little more than $30,000,000—say $31,000,000, making a total of $86,000,000, which was estimated to be the actual value of the properties of these constituent companies.

Now the Federal Steel Co. said to J. P. Morgan & Co.: If you will give us the stock of these companies, and with it $14,075,000 in money, making $100,000,000 in all, we will give you $100,000,000 of the capital stock of the Federal Steel Co.—$53,000,000 in preferred and $46,000,000 in common. Then J. P. Morgan & Co. entered into an arrangement with—I am not so familiar with that, perhaps, but an arrangement with the syndicate whereby the syndicate agreed to furnish such part of this $14,075,000 as was not furnished by the stockholders of the constituent companies. Then J. P. Morgan & Co. gave to the stockholders of these constituent companies the privilege of bringing to them their stock, together with their proportion of cash, and receiving in exchange stock of the Federal Steel Co., which J. P. Morgan & Co. received from the Federal Steel Co. Now, in making that trade, the Federal Steel Co. issued its stock and obtained in exchange $14,075,000 in cash, besides the stock of these constituent companies, which represented property of the value of about $85,000,000 or $86,000,000, including about $10,000,000 in cash. The stockholders of the constituent companies received for their stock, and by the payment in cash in the case of the Illinois Steel Co. of $20 in money with each share of stock, and in the case of the Minnesota Iron Co. of $27.10 in money with each share of stock, and in the case of the Elgin, Joliet & Eastern Railroad Co., of $17.50 with each share of stock, the stock of the Federal Steel Co., about one share of preferred and about eight-tenths of a share of common. In making this exchange and doing this business J. P. Morgan & Co. made a profit of about $200,000; I will not be exact; they paid all the expenses, including about 40,000 for incorporation fees to the State of New Jersey.

TABLE No. 1.—*Production of iron and steel plates and sheets by some of the leading plate makers from 1900 to 1904 inclusive; also by all makers for the same year.*

[NOTE.—For the five years covered by table No. 1 the production of plates was not separated from the production of sheets. In 1905, however, at the request of the manufacturers of iron and steel the production of plates of No. 12 gauge and thicker was separated from sheets of No. 13 gauge and thinner. This separation has since been maintained. Very few sheets were made, however, from 1900 to 1904 by the individual companies named below. Nail plate is not included in any of the figures given.]

Companies.	Plates and sheets (gross tons).				
	1900	1901	1902	1903	1904
Carnegie Steel Co	466,902	571,378	672,881	625,333	550,004
Jones & Laughlin	73,990	53,412	75,811	75,125	51,427
Illinois Steel Co	93,119	109,595	123,042	113,039	62,480
Crucible Steel Co	61,342	29,005	29,768	25,696	18,357
Otis Steel Co	20,773	27,723	35,872	31,752	28,478
Tidewater Steel Co	9,846	19,359	35,387	23,936	....
Lukens Iron & Steel Co	58,026	97,232	100,204	99,793	65,420
Worth Brothers Co	56,589	72,836	91,145	84,486	81,929
Central Iron & Steel Co	86,062	111,293	123,291	107,393	83,664
American Steel & Wire Co	48,842	46,809	69,625	59,978	48,423
Glasgow Iron Co	20,506	26,080	32,786	28,834	20,644
Total by companies named	995,997	1,164,722	1,389,812	1,275,365	1,010,826
Total by all companies	1,794,528	2,254,425	2,665,409	2,599,665	2,421,398

TABLE No. 2.—*Production of plates and sheets by some of the leading plate makers in 1905; also the total production of plates and sheets by all makers in the same year.*

[NOTE.—Prior to 1905 the production of plates of No. 12 gauge and thicker and sheets of No. 13 gauge and thinner was not separately ascertained.]

Names of companies.	Plates.	Sheets.	Total.
	Gross tons.	*Gross tons.*	*Gross tons.*
Carnegie Steel Co	875,278	....	875,278
Jones & Laughlin Steel Co	95,268	....	95,268
Illinois Steel Co	148,564	....	148,564
Crucible Steel Co	22,703	7,478	30,181
Otis Steel Co	45,597	....	45,597
Lukens Iron & Steel Co	149,170	....	149,170
Worth Bros. Co	139,717	....	139,717
Central Iron & Steel Co	113,381	....	113,381
American Steel & Wire Co	83,516	....	83,516
Glasgow Iron Co	33,934	....	33,934
Total by companies named	1,707,128	7,478	1,714,606
Total by all companies	2,041,206	1,491,024	3,532,230

READING IRON CO., SECRETARY'S OFFICE,
Reading, Pa., March 30, 1912.

MR. JAMES M. SWANK,
General Manager, American Iron & Steel Association,
261 South Fourth Street, Philadelphia.

DEAR SIR: In response to your request, we desire to state that our average selling price of wrought-iron pipe, per net ton, for the four months ending March 1899, was as follows:

	December, 1898.	January and February, 1899.	March 1 to 15, 1899.	March 15 to 31, 1899.
Lap welded	$32.78	$32.78	$40.03	$44.64
Butt welded	32.86	32.86	39.90	44.34

We have given fair average prices. Our old records are boxed and stored away, and any hurried attempt on our part to obtain prices covering each particular size would likely involve us in confusion at this late hour.

Yours truly,

GEO. W. DELANY, *Secretary.*

P. S.—We do not make steel pipe.

NOTES ON TABLE 1.

American Telephone & Telegraph Co.—This company owns a majority of the $32,000,000 outstanding capital stock of the Western Union Telegraph Co.

Atlantic Coast Line Co., The.—The Atlantic Coast Line Co. owns $50,000 of the $100,000 capital stock of the Northwestern Carolina Ry. of South Carolina. The Atlantic Coast Line R. R. Co. owns jointly with the Louisville & Nashville R. R. Co. $1,500,000 of the $3,000,000 capital stock of the Western Ry. of Alabama.

Atlantic Coast Line Railroad Co.—A majority of the $200,000 capital stock of the Belt Line Ry. of Montgomery, Ala., and of the $12,000 capital stock of the Charleston & Western Carolina R. R. Co., is owned by this company. This company owns $30,600,000 of the $60,000,000 capital stock of the Louisville & Nashville R. R. Co.

Boston Consolidated Gas Co.—The Massachusetts Gas Cos. own $15,110,600 of the $15,124,600 capital stock of this company.

Chicago, Burlington & Quincy R. R. Co.—The Northern Pacific R. R. Co. and the Great Northern R. R. Co. own jointly $107,613,500 of the $110,839,100 outstanding capital stock of this road. The Chicago, Burlington & Quincy R. R. Co. owns $26,667,500 of the common, $1,130,000 of the first preferred, and $6,078,700 of the second preferred, a total of $33,786,200 of the $48,000,000 outstanding capital stock of the Colorado & Southern R. R. Co.

Colorado & Southern R. R. Co.—The Chicago, Burlington & Quincy R. R. Co. owns $33,786,200 of the $48,000,000 outstanding capital stock of this railroad.

Consolidated Gas Co., The.—This company owns $1,886,200 of the $3,500,000 capital stock of the New York Mutual Gas Light Co.

Erie & Jersey R. R. Co.—This road is leased to the Erie Terminal Railroad Co., which company grants trackage rights to the Erie R. R. Co.

Erie R. R. Co.—This company owns the entire $100,000 capital stock of the Chicago & Erie R. R. Co.; it owns $25,594,844 of the $26,000,000 capital stock of the New York, Susquehanna & Western R. R. Co. It owns a majority of the $2,228,600 outstanding capital stock of the New York & New Jersey R. R. Co.

Keystone Watch Case Co.—This company owns and operates the E. Howard Watch Works, of which Robert Winsor is a director.

Lake Shore & Michigan Southern R. R. Co.—This road owns $5,930,000 of the preferred, $5,940,000 of the common stock, a total of $11,870,000 capital stock of the $23,680,000 outstanding capital stock of the Lake Erie & Western R. R.; it owns $2,503,000 first preferred, $6,275,000 second preferred, and $6,240,000 common, a total of $15,018,000 of the $30,000,000 outstanding capital stock of the New York, Chicago & St. Louis R. R. Co. This road owns $7,500,150 of the $21,000,000 outstanding capital stock of the Pittsburg & Lake Erie R. R.

Louisville & Nashville R. R. Co.—The Atlantic Coast Line R. R. Co. owns $30,600,000 of the $60,000,000 outstanding capital stock of this company. This company owns $7,177,600 of the $10,000,000 outstanding capital stock of the Nashville, Chattanooga & St. Louis Ry. Co.

Louisville & Nashville R. R. Co.—This company and the Atlantic Coast Line R. R. Co. own jointly $1,500,000 of the $3,000,000 capital stock of the Western Ry. of Alabama.

Marquette & Bessemer Dock & Navigation Co.—The $50,000 capital stock of this company is owned in equal proportions by the Bessemer & Lake Erie R. R. Co. and the Pere Marquette R. R. Co.

Pere Marquette R. R. Co.—This company owns half of the $50,000 capital stock of the Marquette & Bessemer Dock & Navigation Co.

Massachusetts Gas Cos.—The Massachusetts Gas Cos. own $15,110,600 of the $15,124,600 capital stock of the Boston Consolidated Gas Co.

Mobile & Ohio R. R. Co.—The Southern Ry. Co. owns $5,670,200 of the $6,070,600 capital stock of this company.

Nashville, Chattanooga & St. Louis Ry. Co.—The Louisville & Nashville R. R. Co., owns $7,177,600 of the $10,000,000 outstanding capital stock of this company.

New England Navigation Co., The.—All of the $53,000,000 outstanding capital stock of this company is owned by the New York, New Haven & Hartford R. R. Co.

New Jersey Junction R. R. Co.—All of the $100,000 outstanding capital stock of the New Jersey Junction Railroad Co. is owned by the New York, New Haven & Hartford R. R. Co.

New York Central & Hudson River R. R. Co.—This company owns 91½ per cent of the $45,750,000 outstanding capital stock of the Lake Shore & Michigan Southern R. R. Co.; it owns the entire capital stock of the Carthage & Adirondack Ry. Co., the entire capital stock of the Mohawk & Malone Ry. Co., the entire capital stock of the New Jersey Junction R. R. Co., the capital stock of the New York & Putnam R. R. Co., which in turn owns the New York & Northern Ry. Co.; it owns the entire capital stock of the St. Lawrence & Adirondack Ry. Co., the entire capital stock of the West Shore R. R. Co., and the entire capital stock of the New York & Ottawa Ry. Co. The $1,000,000 capital stock of the Terminal Railroad of Buffalo is owned in equal proportions by the New York Central & Hudson River R. R. Co. and the Lake Shore & Michigan Southern R. R. Co.

New York Mutual Gas Light Co.—The Consolidated Gas Co. of New York owns $1,886,200 of the $3,500,000 capital stock of this company.

New York, New Haven & Hartford R. R. Co.—This company owns $1,640,000 of the $2,967,000 outstanding capital stock of the Hartford & Connecticut Western Railroad, which road is leased to the Central New England Company, a subsidiary of the New York, New Haven & Hartford R. R. Co. This company owns $3,212 of the $4,000 preferred and $13,105,185 of the $58,113,982 common stock of the New York, Ontario & Western Railway Co. This company controls the Millbrook Company, which in turn owns the New York, Westchester & Boston Railway Co.

New York, Ontario & Western Ry. Co.—The New York, New Haven & Hartford R. R. Co. owns 3,212 of the $4,000 preferred and $13,105,185 of the $58,113,982 common stock of this company.

New York, Philadelphia & Norfolk R. R. Co.—Practically all of the $2,500,000 capital stock of this company is owned by the Pennsylvania R. R. Co.

New York & Putnam R. R. Co.—All of the $6,500,000 capital stock of this company is owned by the New York Central & Hudson River R. R. Co. The New York & Putnam R. R. Co. also owns the New York & Northern Railway Co.

New York, Susquehanna & Western R. R. Co.—The Erie R. R. Co. owns $25,594,844 of the $26,000,000 outstanding capital stock of this road. This company owns $10,577,200 of the $19,342,500 capital stock of the Northern Central Railway Co.

New York, Westchester & Boston Railway Co. —All of the $5,000,000 outstanding capital stock of this company is owned by the Millbrook Co., which is controlled by the New York, New Haven & Hartford R. R. Co.

Northern Pacific R. R. Co.—This company owns $53,806,750 of the $110,839,100 outstanding capital stock of the Chicago, Burlington & Quincy R. R. Co.

Northern Central Ry. Co.—The Pennsylvania R. R. Co. owns $10,577,200 of the $19,342,500 capital stock of this company.

Northwestern Ry. of South Carolina.—The Atlantic Coast Line Co. owns $50,000 of the $100,000 capita stock of this company.

Pennsylvania R. R. Co.—This company owns practically all of the $2,500,000 capital stock of the New York, Philadelphia & Norfolk R. R. Co.; it owns $15,000,000 of the $25,000,000 outstanding capital stock of the Pennsylvania Tunnel & Terminal R. R. Co.

The Reading Co. owns the entire capital stocks of the Philadelphia & Reading R. R. Co. and the Philadelphia & Reading Coal & Iron Co., and $14,504,000 of the outstanding $27,436,800 capital stock of the Central R. R. of New Jersey. It also owns the $20,000,000 purchase money bonds of the Philadelphia & Reading Railroad.

Pennsylvania Tunnel & Terminal R. R. Co.—The Pennsylvania R. R. Co. owns $15,000,000 of the $25,000,000 outstanding capital stock of this company.

Philadelphia Co., The.—The United Rys. Investment Co. owns $24,200,000 of the $38,626,000 outstanding capital stock of this company. The Philadelphia Co. owns all of the $5,000,000 outstanding capital stock of the Pittsburgh Rys. Co.

Philadelphia Rapid Transit Co.—This company leases the Union Traction Co., of Philadelphia, which in turn leases the Philadelphia Traction Co.

Pittsburgh & Lake Erie R. R. Co.—The Lake Shore & Michigan Southern R. R. Co. owns $7,500,150 of of the $21,000,000 outstanding capital stock of this company.

Philadelphia Traction Co., The.—This company is leased by the Union Traction Co., of Philadelphia, which in turn is leased by the Philadelphia Rapid Transit Co.

Pittsburgh, Bessemer & Lake Erie R. R. Co.—The Carnegie Co., a subsidiary of the United States Steel Corporation, owns $5,500,000 common and $5,100,000 preferred of the $10,000,000 common and $2,000,000 preferred capital stock of this company.

Pittsburgh Rys. Co., The.—All of the $5,000,000 outstanding capital stock of this company is owned by the Philadelphia Co.

Southern Railway Co.—This company owns $5,670,200 of the $6,070,600 capital stock of the Mobile & Ohio R. R. Co.

Terminal Railroad of Buffalo, The.—The $1,000,000 capital stock of this company is owned in equal proportions by the New York Central & Hudson River R. R. Co. and the Lake Shore & Michigan Southern R. R. Co.

Union Traction Co.—This company leases the Philadelphia Traction Co. and is leased by the Philadelphia Rapid Transit Co.

United Rys. Investment Co.—This company owns $24,200,000 of the $38,626,000 outstanding capital stock of the Philadelphia Co.

Western Ry. of Alabama.—The $3,000,000 capital stock of this company is owned jointly by the Louisville & Nashville R. R. Co. and the Atlantic Coast Line R. R. Co.

West Shore R. R. Co.—The entire $10,000,000 capital stock of this company is owned by the New York Central & Hudson River R. R. Co.

Western Union Telegraph Co.—The American Telephone & Telegraph Co. owns a majority of the $32,000,000 outstanding capital stock of this company.

TABLE 2.—*Statement showing capital stock and indebtedness of the railroad companies of which the president, chairman of the executive board, and directors of the United States Steel Corporation are also officers or directors.*

Company.	Capitalization and bonded indebtedness.	Capitalization and bonded indebtedness of subsidiary companies controlled through stock ownership or long-term leases.
Atchison, Topeka & Kansas R. R. Co	$569,437,100	$136,415,195
Atlanta & West Point R. R. Co	2,496,800	400,000
Atlantic Coast Line Co., The:		
Atlantic Coast Line R. R. Co	203,048,870	286,666,638
Baltimore & Ohio R. R. Co	533,544,933	112,936,460
Bessemer & Lake Erie R. R. Co	4,530,000	27,669,000
Chicago, Burlington & Quincy R. R. Co	320,695,100	132,957,621
Chicago & North Western R. R. Co	361,740,143	66,409,223
Cincinnati, New Orleans & Texas Pacific R. R. Co	7,006,400	19,159,000
Chicago Great Western R. R. Co	105,268,115	57,066,552
Chicago, Indianapolis & Louisville Ry. Co	33,712,000	2,018,000
Delaware, Lackawanna & Western R. R. Co	30,667,720	93,801,304
Duluth & Iron Range R. R. Co	16,151,000	....
Duluth, Mesabi & Northern R. R. Co	17,213,500	....
Elgin, Joliet & Eastern R. R. Co	20,000,000	18,400,000
Erie R. R. Co	402,269,047	92,845,590
Lehigh Valley R. R. Co	127,017,074	97,020,148
New York Central & Hudson River R. R. Co	491,321,727	948,780,334
New York, New Haven & Hartford R. R. Co	376,069,925	388,715,999
Northern Pacific R. R. Co	546,566,000	7,717,000
Pere Marquette R. R. Co	93,072,767	....
Pennsylvania R. R. Co	705,979,773	711,258,295
Reading Co., The: All subsidiaries, including Central R. R. of New Jersey and Philadelphia & Reading R. R. Co	....	260,372,424
Rock Island Co., The: Chicago, Rock Island & Pacific Ry. Co	286,284,200	75,071,756
Richmond-Washington Co, The:		
Richmond, Fredericksburg & Potomac R. R	....	6,991,600
Washington Southern Ry. Co	....	7,961,000
Southern Railway Co	399,383,500	147,702,757
Seaboard Air Line Ry. Co	190,808,000	1,010,000
Union Pacific R. R. Co	512,045,650	304,853,583
Western Railway of Alabama	4,543,000	....
Total	6,360,872,344	4,004,199,479

Total capitalization and bonded indebtedness of railroad corporations in which the president and other directors of the United States Steel Corporation are officers or directors, $10,365,071,833.

Total capitalization and bonded indebtedness of all railroads in United States as given in Interstate Commerce Commission's Report, $18,417,132,238.

The foregoing table was compiled from Moody's Manual of Corporations, Poor's Manual of Railroads, and the 1910 report of the Interstate Commerce Commission, giving statistics of railroads in the United States for the year ending June 30, 1910. No complete statistics for the year ending June 30, 1911, were available. In some cases the entire capital stock of subsidiary companies are owned by the parent corporation; in rare instances both capital stock and bonds are so owned, but no allowances are made for this fact in the totals; none was made by the Interstate Commerce Commission's compilers. Where a holding company only controls other railroad companies and has no mileage of its own, its capital stock is not given. For instance, the Atlantic Coast Line Co. owns the Atlantic Coast Line Railroad Co., which in turn owns a majority of the stock of the Louisville & Nashville Railroad. Therefore the capital stock of the Atlantic Coast Line Railroad Co. is given, and the Louisville & Nashville Railroad Co.'s stock is included in that of its subsidiary.

TABLE 3.—*Statement showing capital, surplus, and deposits of the national, State, and savings banks, trust companies, and life and fire insurance companies, of which the officers and directors of the United States Steel Corporation are also officers or directors.*

Companies.	Capital, surplus, undivided profits, and deposits.	Companies.	Capital, surplus, undivided profits, and deposits.
Astor Trust Co	$16,726,380	Land Title Trust Co	$13,424,000
Atlantic Mutual Insurance Co	14,888,902	Manhattan Trust Co., New York	22,173,200
Aetna Insurance Co., Hartford	12,369,016	Mutual Life Insurance Co	544,185,205
Bankers' Trust Co	172,860,900	Mellon National Bank, Pittsburgh, Pa	44,230,970
Bank of North America, Philadelphia	16,021,360	Home Insurance Co	15,329,613
Bank of Commerce, Cleveland, Ohio	18,279,000	Merchants' Loan & Trust Co., Chicago, Ill	72,415,480
Chase National Bank	117,758,260	Metropolitan Trust Co. of New York	38,771,000
Continental Fire Insurance Co	16,246,478	Massachusetts Bonding & Insurance Co	737,860
City Deposit Bank, Pittsburgh, Pa	4,461,110	National Bank of Commerce, New York	216,492,950
Continental & Commercial National Bank, Chicago	206,739,010	Newport Trust Co	1,865,510
Chatham & Phoenix National Bank, New York	61,900,280	National Union fire Insurance Co	1,308,102
Commercial Trust Co. Philadelphia	13,610,560	New York Trust Co	61,900,280
Citizens' Savings & Trust Co	50,759,310	National City Bank, New York	261,798,390
Cleveland Trust Co	31,290,400	National Shawmut Bank, Boston, Mass	109,191,870
Casualty Company of America	1,000,182	Old Colony Trust Co., Boston	94,376,310
Commonwealth Trust Co., Boston	15,563,520	Philadelphia National Bank	57,902,860
Farmers' Loan & Trust Co	123,401,590	Reliance Life Insurance Co	2,957,677
First National Bank of Chicago	138,224,170	Standard Trust Co. of New York	24,840,390
First National Bank of New York	148,741,430	Second National Bank of Richmond, Ind	2,292,480
First Security Company of New York	3,500,000	Safe Deposit & Trust Co. of Baltimore	14,572,020
Fidelity-Phoenix Fire Insurance Co	5,885,745	Union Trust Co., Pittsburgh	66,230,220
Fourth Street National Bank, Philadelphia	56,649,970	Union Insurance Co., Pittsburgh	194,748
Fidelity Trust Co., Philadelphia	39,214,200	Union National Bank, Richmond, Ind	1,189,450
Farmers' Deposit National Bank, Pittsburgh, Pa	34,161,090	Union Trust Co., Springfield, Mass	7,481,600
Farmers' Deposit Savings Bank, Pittsburgh, Pa	4,786,970	Western Saving Fund Society, Philadelphia	30,068,360
Fidelity Title & Trust Co., Pittsburgh	19,239,300	Wilmington Savings & Trust Co., Wilmington, N. C	1,959,490
Guaranty Trust Co., New York	171,260,100		
Gary-Wheaton Bank, Wheaton, Ill	735,650		
German Alliance Insurance Co	1,190,740		
German-American Insurance Co	9,404,150		
Industrial Trust Co., Providence, R. I.	49,601,750	Total	3,314,811,178
Liberty National Bank, New York	30,449,620		

TABLE 4.—*Statement showing capital and funded indebtedness of street railways, terminal, steamship, express, and telegraph companies of which the president, chairman of the executive board, and directors of the United States Steel Corporation are also officers or directors.*

Companies.	Capitalization and bonded indebtedness.	Companies.	Capitalization and bonded indebtedness.
Adams Express Co	$48,000,000	Old Dominion Steamship Co	$2,500,000
American Telephone & Telegraph Co	569,437,100	Pennsylvania Tunnel & Terminal Co	25,020,000
Boston Elevated Ry. Co	33,250,000	Philadelphia Rapid Transit Co	34,974,675
Hudson & Manhattan R. R. Co	114,616,041	Philadelphia Traction Co	20,338,000
International Mercantile Marine Co	173,124,706	Philadelphia Co	67,854,000
Mexican Telegraph Co	3,589,400	Terminal R. R. of Buffalo	1,000,000
Mesabi Steamship Co	1,391,000	West Pennsylvania railroads	11,516,000
Marquette & Bessemer Dock & Navigation Co	500,000	Western Union Telegraph Co	140,358,968
Milledgeville Ry. Co	60,000		
New England Navigation Co	24,249,000	Total	1,271,778,890

TABLE 5.—*Statement showing capital and funded indebtedness of the industrial corporations of which the officers and directors of the United States Steel Corporation are also officers or directors.*

Companies.	Capitalization and bonded indebtedness.	Companies.	Capitalization and bonded indebtedness.
American Bank Note Co	$8,992,394	Massachusetts Gas Co	$30,881,000
American Can Co	82,466,600	New Jersey General Security Co	2,000,000
Allis-Chalmers Co	47,018,000	New York Edison Co	38,742,622
American Steel Foundries Co	23,590,300	New York Mutual Gas Light Co	3,436,600
American Agricultural Chemical Co	43,577,700	National Supply Co., Toledo, Ohio	4,000,000
Blaugas Co	5,000,000	National Biscuit Co	54,040,500
Broadway Realty Co	4,000,000	New England Cotton Yarn Co	10,794,000
Boston Consolidated Gas Co	15,124,600	Ohio Iron & Steel Co	5,000,000
Consolidated Gas Co. of New York	108,618,600	Pennsylvania Coal & Coke Co	21,061,500
Cleveland-Cliffs Iron Co	5,000,000	Pennsylvania Water & Power Co	16,075,000
Cumberland Corporation	58,500,000	Rock Island-Rockport Lime Co	3,688,500
Electric Storage Battery Co	18,000,000	Spring Brook Water Co	10,989,000
East Jersey Water Co	800,000	Sheffield Coal & Iron Co	4,000,000
General Electric Co	80,143,200	Seattle Electric Co	25,265,000
Gulf Oil Corporation	18,337,000	Securities Co	4,765,015
Harris Bros. & Co. (Inc.)	3,800,000	Southern Cotton Oil Co	10,000,000
Hartford Carpet Corporation	5,000,000	Texas & Pacific Coal Co	3,500,000
International Harvester Co	140,000,000	Toledo Furnace Co	2,000,000
International Nickel Co	29,143,400	Torrington Co., The	4,150,000
International Smelting & Refining Co	10,000,000	United States Steel Corporation	1,464,935,467
Keystone Watch Case Co	6,000,000	United States Natural Gas Co	5,038,500
Lehigh & Wilkesbarre Coal Co	28,899,500	United States Improvement Co	55,502,950
Lackawanna Steel Co	77,073,000	Virginia-Carolina Chemical Co	57,384,400
Montclair Water Co	1,000,000	Washburn Wire Co	3,750,000
Manning, Maxwell & Moore (Inc.)	5,000,000	Pullman Co	120,000,000
Mohican Oil & Gas Co	2,000,000	Cuba Co	11,425,000
Madison Square Garden Co	4,000,000	Total	2,803,509,348

A FEW REMARKS FROM THE TRADE.

There is no doubt that this compact little publication is an invaluable companion to the metal-trade business man.

Mr. J. A. FARRELL,
U. S. Steel Corporation, New York.

It has gotten to be so useful to me that I find I need a copy on my desk at home as well as at the office.

Mr. GEO. H. HULL,
American Pig Iron Storage Warrant Co., New York.

This is a most complete book and the data contained therein is very interesting.

HICKMAN, WILLIAMS & CO.,
Chicago, Ill.

It certainly is a most useful book. It is very elaborate and shows great care in preparation, and for anybody connected with any part of the business is an adjunct that is almost indispensable.

NATIONAL LEAD CO.,
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Potomac Electric Power Co.,
Washington, D. C.

Extracts from Metal Statistics, 1912, Published by the American Metal Market. (Copyright 1912.)

Total production.

[Estimated total production to January 1, 1911, and production in 1910; gross tons except in the case of nails, which are given in kegs of 100 pounds.]

	1910	Total through 1910.
Iron ore	[1] 53,000,000	820,000,000
Pig iron	27,303,567	420,000,000
Open-hearth steel [2]	16,504,509	110,000,000
Bessemer steel [2]	9,412,772	170,000,000
Total steel [2]	26,094,919	285,000,000
Iron rails	230	10,700,000
Bessemer steel rails	1,884,442	59,200,000
Open-hearth steel rails	1,751,359	4,500,000
All steel rails	3,635,801	63,700,000
Wire rods	2,241,830	27,000,000
Structural shapes	2,266,890	25,000,000
Cut nails (kegs)	1,005,233	200,000,000
Wire nails (kegs)	12,704,902	185,000,000
Tin plates	722,770	6,800,000

[1] Estimated.

[2] Ingots and castings.

Estimates for 1911.

Iron ore	45,000,000
Pig iron	23,700,000
Steel	23,000,000

Iron ore production.

	Lake Superior.	All other.	Total.
	Gross tons.	*Gross tons.*	*Gross tons.*
1889	7,519,614	6,998,427	14,518,041
1890	8,944,031	7,092,012	16,036,043
1891	7,621,465	6,969,713	14,591,178
1892	9,564,388	6,732,278	16,296,666
1893	6,594,620	4,993,009	11,587,629
1894	7,682,548	4,197,131	11,879,679
1895	10,268,978	5,688,636	15,957,614
1896	10,566,359	5,439,090	16,005,449
1897	12,205,522	5,312,524	17,518,046
1898	13,779,308	5,654,408	19,433,716
1899	17,802,955	6,880,218	24,683,173
1900	20,564,238	6,988,923	27,553,161
1901	21,445,903	7,441,576	28,887,479
1902	26,977,404	8,576,731	35,554,135
1903	26,573,271	8,446,037	35,019,308
1904	20,198,311	7,446,019	27,644,330
1905	33,325,018	9,201,115	42,526,133
1906	37,876,371	9,873,357	47,749,728
1907	41,526,579	10,194,040	51,720,619
1908	28,108,079	7,875,257	35,983,336
1909	41,863,635	9,430,636	51,294,271
21 years	411,008,597	151,431,137	562,439,734

Iron ore on Lake Erie Docks.

	May 1.	Dec. 1.
1902	2,848,194	7,074,254
1903	3,592,367	6,371,085
1904	4,534,103	5,763,399
1905	2,271,631	6,438,967
1906	1,791,090	6,252,455
1907	1,976,988	7,385,728
1908	5,480,300	8,441,533
1909	5,370,268	8,965,789
1910	5,444,080	9,426,681
1911	6,778,494	9,131,664

Lake Superior iron ore.

[On Lake Erie Dock.]

	Old range.		Mesabi.	
	Bessemer.	Non-Bessemer.	Bessemer.	Non-Bessemer.
1885	4.00	4.00		
1886	5.00	4.50		
1887	6.00	5.00		
1888	4.75	4.00		
1889	5.00	3.75		
1890	6.00	4.50		
1891	4.75	3.75		
1892	4.50	3.75		
1893	4.00	3.25		
1894	2.75	2.00	2.50	1.75
1895	2.90	2.25	2.25	1.90
1896	4.00	2.60	3.25	2.40
1897	2.65	2.25	2.10	1.80
1898	2.75	1.80	2.15	1.70
1899	2.80	2.00	2.25	1.90
1900	5.50	4.15	4.40	4.00
1901	4.25	2.85	2.75	2.35
1902	4.25	3.00	3.00	2.60
1903	4.50	3.60	4.00	3.20
1904	3.00	2.60	2.75	2.35
1905	3.75	3.20	3.50	3.00
1906	4.25	3.70	4.00	3.50
1907	5.00	4.20	4.75	4.00
1908	4.50	3.70	4.25	3.50
1909	4.50	3.70	4.25	3.50
1910	5.00	4.20	4.75	4.00
1911	4.50	3.70	4.25	3.50

Particularly 1894 to 1899 some grades sold at materially higher prices. Base ore content (natural state), 1906 and some previous years: Bessemer, 56.70; non-Bessemer, 52.80; 1907 and later: Bessemer, 55; non-Bessemer, 51.50.

Connellsville coke.

[Prompt shipment f. o. b. ovens.]

	Furnace.			Foundry.		
	1909	1910	1911	1909	1910	1911
January	1.70	2.60	1.40	2.10	3.05	2.00
February	1.65	2.25	1.47	2.00	2.75	2.10
March	1.55	2.00	1.57	2.00	2.60	2.15
April	1.43	1.80	1.58	1.90	2.40	2.10
May	1.45	1.70	1.50	1.85	2.25	2.00
June	1.50	1.65	1.45	1.85	2.20	1.95
July	1.55	1.65	1.45	1.85	2.15	1.90
August	1.75	1.65	1.53	2.00	2.15	1.90
September	2.30	1.60	1.50	2.50	2.15	1.85
October	2.80	1.55	1.50	2.75	2.10	1.85
November	2.85	1.45	1.50	3.00	2.00	1.90
December	2.85	1.50	1.68	3.10	2.00	1.95
Average	1.95	1.78	1.51	2.24	2.32	1.97

Ferromanganese.

[Averaged from quotations, carloads to 100 tons, f. o. b. Baltimore.]

	1907	1908	1909	1910	1911
January	77.00	47.50	45.50	44.25	38.25
February	71.00	45.50	43.50	43.60	37.75
March	73.00	44.00	41.50	42.75	37.30
April	69.00	43.00	42.00	41.00	36.75
May	67.00	43.50	41.00	40.75	36.50
June	63.00	45.00	40.00	39.75	36.50
July	61.00	44.50	41.50	39.25	36.85
August	60.00	43.50	41.75	39.25	37.00
September	57.00	43.00	42.75	39.40	36.50
October	54.00	42.75	43.50	38.85	37.00
November	51.00	44.50	44.75	38.50	37.25
December	50.00	45.00	45.00	38.50	39.50
Average	62.75	44.31	42.73	40.49	37.26

Connellsville coke.

[Compiled from official sources by Connellsville Courier; Connellsville and lower Connellsville region.]

	Total ovens.	Shipments (net tons).	Average Price.
1880	7,211	2,205,946	$1.79
1881	8,208	2,639,002	1.63
1882	9,283	3,043,394	1.47
1883	10,176	3,552,402	1.14
1884	10,543	3,192,105	1.13
1885	10,471	3,096,012	1.22
1886	10,952	4,180,521	1.36
1887	11,923	4,146,989	1.79
1888	13,975	4,955,553	1.19
1889	14,458	5,930,428	1.34
1890	16,020	6,464,156	1.94
1891	17,204	4,760,665	1.87
1892	17,256	6,329,452	1.83
1893	17,513	4,805,623	1.49
1894	17,834	5,454,451	1.00
1895	17,947	8,244,438	1.23
1896	18,351	5,411,602	1.90
1897	18,628	6,915,052	1.65
1898	18,643	8,460,112	1.55
1899	19,689	10,129,764	2.00
1900	20,954	10,166,234	2.70
1901	21,575	12,609,949	1.95
1902	26,329	14,138,740	2.37
1903	28,092	13,345,230	3.00
1904	29,119	12,427,468	1.75
1905	30,842	17,896,526	2.26
1906	34,059	19,999,326	2.75
1907	35,697	19,029,058	2.90
1908	37,842	10,700,022	1.80
1909	39,158	17,785,832	2.00
1910	39,137	18,689,722	2.10
1911	38,904	16,334,174	1.72

Approximate shipments by quarters, 1911:	
First quarter	4,174,220
Second quarter	4,056,082
Third quarter	3,958,039
Fourth quarter	4,145,833
Year	16,334,174

United States pig iron production.

Years.	Tons (2,240 pounds).
1831-1840	2,400,000
1841-1850	5,500,000
1851-1860	6,700,000
1861	653,164
1862	703,270
1863	[1] 846,075
1864	[1] 1,014,282
1865	831,770
1866	[1] 1,205,663
1867	[1] 1,305,023
1868	[1] 1,431,250
1869	[1] 1,711,287
1870	1,665,179
1861-1870	11,366,963
1871	1,706,793
1872	[1] 2,548,713
1873	[1] 2,560,963
1874	2,401,262
1875	2,023,733
1876	1,868,961
1877	2,066,594
1878	2,301,215
1879	[1] 2,741,853
1880	[1] 3,835,191
1871-1880	24,055,278
1881	[1] 4,144,254
1882	[1] 4,623,323
1883	4,595,510
1884	4,097,868
1885	4,044,526
1886	[1] 5,683,329
1887	[1] 6,417,148
1888	[1] 6,489,738
1889	[1] 7,603,642
1890	[1] 9,202,703
1881-1890	56,902,041
1891	8,279,870
1892	9,157,000
1893	7,124,502
1894	6,657,388
1895	[1] 9,446,308
1896	8,623,127
1897	[1] 9,652,680
1898	[1] 11,773,934
1899	[1] 13,620,703
1900	[1] 13,789,242
1891-1900	98,124,754
1901	[1] 15,878,354
1902	[1] 17,821,307
1903	[1] 18,009,252
1904	16,497,033
1905	[1] 22,992,380
1906	[1] 25,307,191
1907	[1] 25,781,361
1908	15,936,018
1909	[1] 25,795,471
1910	[1] 27,303,567
1901-1910	211,321,934
1831-1900	205,049,036
1901-1910	211,321,934
1831-1910	416,370,970
1911 (estimated)	23,700,000

[1] Record years.

Production of pig iron by grades.

[Tons, 2,240 pounds.]

Grades.	1900	1905	1907	1908	1909	1910
Bessemer and low phosphates	7,797,327	12,407,116	13,231,620	7,216,976	10,557,370	11,245,642
Basic (mineral fuel)	1,072,376	4,105,179	5,375,219	4,010,144	8,250,225	9,084,608
Forge pig iron	793,092	727,817	683,167	457,164	725,624	564,157
Foundry and ferro-silicon	3,376,445	4,758,038	5,151,209	3,637,622	5,322,415	5,260,447
Malleable	173,413	635,236	920,290	414,957	658,048	843,123
Spiegeleisen	207,505	227,797	283,430	111,376	142,831	153,055
Ferromanganese	48,472	62,186	55,918	40,642	82,209	71,376
White, mottled, direct casting, etc	138,612	69,011	80,508	47,137	56,749	81,159
Total	13,789,242	22,992,380	25,781,361	15,936,018	25,795,471	27,303,567

Pig iron production.

[United States production—Tons (2,240 pounds).]

Years.	First half.	Second half.	Total.
1883	2,352,019	2,243,491	4,595,510
1884	2,024,126	2,073,742	4,097,868
1885	1,920,371	2,124,155	4,044,526
1886	2,637,687	3,045,642	5,683,329
1887	3,049,295	3,367,853	6,417,148
1888	3,020,092	3,469,646	6,489,738
1889	3,661,603	3,942,039	7,603,642
1890	4,560,513	4,642,190	9,202,703
1891	3,368,107	4,911,763	8,279,870
1892	4,769,683	4,387,317	9,157,000
1893	4,562,918	2,561,584	7,124,502
1894	2,717,983	3,939,405	6,657,388
1895	4,087,558	5,358,750	9,446,308
1896	4,976,236	3,646,891	8,623,127
1897	4,403,476	5,249,204	9,652,680
1898	5,869,703	5,904,231	11,773,934
1899	6,289,167	7,331,536	13,620,703
1900	7,642,569	6.146,673	13,789,242
1901	7,674,613	8,203,741	15,878,354
1902	8,808,754	9,012,733	17,821,307
1903	9,707,367	8,301,885	18,009,252
1904	8,173,438	8,323,595	16,497,033
1905	11,163,175	11,829,205	22,992,380
1906	12,582,250	12,724,941	25,307,191
1907	13,478,044	12,303,317	25,781,361
1908	6,918,004	9,018,014	15,931,018
1909	11,022,346	14,773,125	25,795.471
1910	14,978,738	12,324,829	27,303,567
1911	11,665,796	[1] 12,000,000	[1] 23,700,000

[1] Estimated.

Cast-iron pipe.

[Average prices 6-inch cast-iron water pipe, 30 pounds per foot, f. o. b. New York City, carload lots, per ton of 2,000 pounds.]

	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
January	24.50	29.25	24.50	28.00	29.75	34.25	27.00	24.50	25.75	22.00
February	25.00	29.25	24.25	28.50	29.50	34.25	26.75	24.25	25.75	21.50
March	26.25	30.75	24.25	26.75	30.50	34.00	26.25	25.25	25.75	21.00
April	26.00	31.00	24.25	27.00	29.75	33.50	26.25	25.00	25.75	21.00
May	27.75	30.75	24.00	27.25	31.00	34.25	26.25	25.25	25.75	21.00
June	28.00	30.75	23.50	27.25	32.50	33.50	25.75	26.00	25.50	21.00
July	28.50	30.75	23.50	27.25	30.25	34.00	25.75	26.25	24.25	21.00
August	29.50	29.50	23.50	27.25	30.50	32.50	25.25	26.00	23.75	21.00
September	29.50	29.00	23.00	27.25	31.00	33.00	25.75	25.75	23.75	21.00
October	29.50	26.00	23.25	28.25	33.00	33.50	25.75	25.50	23.25	21.00
November	30.75	24.50	25.00	29.00	33.25	28.50	25.00	27.00	22.00	21.75
December	29.25	24.25	27.00	29.25	35.50	28.00	25.50	27.25	22.00	22.00
Average	27.88	28.81	24.17	27.75	31.38	32.77	25.94	25.67	24.44	21.27

Bessemer steel billets.

[Average quotations, Pittsburgh.]

	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
January	25.60	25.00	21.56	16.12	14.90	16.80	15.42	14.93	16.62	34.50
February	26.00	24.36	21.62	15.75	14.95	17.38	15.25	15.06	18.00	34.87
March	26.25	23.00	22.60	15.55	14.84	17.09	15.44	15.25	24.30	33.00
April	25.35	22.81	22.44	15.69	15.44	19.53	14.60	15.06	25.37	32.00
May	25.50	22.41	21.69	18.00	16.30	19.50	13.82	14.85	26.75	28.90
June	25.25	22.97	21.70	18.12	18.63	19.12	14.06	14.65	30.10	27.25
July	25.50	23.50	21.06	18.00	20.75	18.85	14.00	14.50	33.12	21.00
August	25.31	23.81	20.45	17.15	21.75	18.75	14.00	15.85	35.40	18.20
September	25.00	23.65	19.31	17.19	24.00	19.75	15.60	16.00	38.37	16.93
October	24.90	23.53	18.06	16.00	21.90	19.75	16.44	15.56	38.75	16.50
November	24.16	24.94	17.37	15.57	19.13	20.00	15.57	15.06	36.50	18.95
December	24.20	22.40	16.69	15.12	16.97	17.50	15.00	15.80	33.75	19.75
Average	25.08	23.53	20.38	16.52	18.30	18.67	14.93	15.21	29.75	25.15

Bessemer steel billets.

[Average quotations, Pittsburgh.]

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
January	19.75	27.50	29.60	23.00	22.75	26.25	29.40	28.00	25.00	27.00	23.00
February	20.31	29.37	29.87	23.00	23.50	26.50	29.50	28.00	25.00	27.00	23.00
March	22.88	31.25	30.62	23.00	24.00	26.70	29.00	28.00	23.00	27.00	23.00
April	24.00	31.50	30.25	23.00	24.00	27.00	30.12	28.00	23.00	26.75	23.00
May	24.00	32.20	30.37	23.00	23.50	26.40	30.30	28.00	23.00	25.85	22.92
June	24.38	32.37	28.87	23.00	22.00	26.63	29.62	25.92	23.00	25.00	21.00
July	24.00	31.75	27.60	23.00	22.00	27.25	30.00	25.00	23.50	25.00	21.00
August	24.20	31.06	27.00	23.00	24.00	27.80	29.25	25.00	24.16	24.60	21.00
September	24.88	29.50	27.00	20.00	25.00	28.00	29.37	25.00	25.00	24.25	20.60
October	26.70	29.70	27.00	19.50	25.62	28.00	28.20	25.00	26.00	23.65	20.00
November	27.00	28.50	24.00	20.25	26.00	28.88	28.00	25.00	27.15	23.25	19.00
December	27.50	29.12	23.00	21.20	26.00	29.50	28.00	25.00	27.20	23.00	19.25
Average	24.13	30.32	27.93	22.08	24.03	27.41	29.23	26.33	24.58	25.20	21.40

Steel bars.

[Base price, Pittsburgh.]

AVERAGED FROM DAILY QUOTATIONS.

	1909	1910	1911
January	1.40	1.48	1.40
February	1.33	1.45	1.40
March	1.20	1.45	1.40
April	1.13	1.45	1.40
May	1.19	1.45	1.37
June	1.20	1.43	1.25
July	1.25	1.45	1.24
August	1.33	1.40	1.20
September	1.37	1.40	1.18
October	1.40	1.40	1.13
November	1.45	1.40	1.07
December	1.45	1.40	1.12
Year	1.31	1.43	1.26

AVERAGED QUARTERLY FROM OPEN QUOTATIONS.

	First.	Second.	Third.	Fourth.	Year.
1897	1.05	0.98	0.92	0.99	0.99
1898	.95	.92	.95	.98	.95
1899	1.12	1.85	2.40	2.37	1.95
1900	2.25	1.87	1.12	1.18	1.61
1901	1.34	1.45	1.45	1.50	1.44
1902 [1]	1.53	1.60	1.60	1.60	1.58
1903	1.60	1.60	1.60	1.45	1.56
1904	1.31	1.35	1.34	1.31	1.33
1905	1.43	1.50	1.50	1.50	1.48
1906	1.50	1.50	1.50	1.55	1.51
1907	1.60	1.60	1.60	1.60	1.60
1908	1.60	1.53	1.40	1.40	1.48
1909	1.31	1.17	1.32	1.43	1.31
1910	1.46	1.44	1.42	1.40	1.43
1911	1.40	1.34	1.21	1.11	1.26

[1] Premiums for prompt delivery.

Steel plates.

[Tank plate, Pittsburgh.]

AVERAGED FROM DAILY QUOTATIONS.

	1909	1910	1911
January	1.60	1.55	1.40
February	1.50	1.55	1.40
March	1.30	1.55	1.40
April	1.28	1.54	1.40
May	1.25	1.50	1.40
June	1.25	1.42	1.35
July	1.33	1.40	1.34
August	1.40	1.40	1.30
September	1.45	1.38	1.28
October	1.50	1.38	1.19
November	1.54	1.37	1.11
December	1.55	1.40	1.13
Year	1.41	1.45	1.31

AVERAGED QUARTERLY FROM OPEN QUOTATIONS.

	First.	Second.	Third.	Fourth.	Year.
1892	1.92	1.85	1.80	1.74	1.83
1893	1.69	1.58	1.54	1.41	1.56
1894	1.23	1.18	1.21	1.17	1.20
1895	1.12	1.21	1.73	1.63	1.42
1896	1.35	1.32	1.19	1.12	1.24
1897	1.10	1.06	1.00	1.04	1.05
1898	1.00	1.07	1.11	1.13	1.08
1899	1.49	2.16	2.62	2.54	2.20
1900	2.17	1.65	1.13	1.27	1.55
1901	1.42	1.56	1.60	1.60	1.55
1902[1]	1.60	1.60	1.60	1.60	1.60
1903	1.60	1.60	1.60	1.60	1.60
1904	1.60	1.60	1.55	1.42	1.54
1905	1.55	1.60	1.60	1.60	1.59
1906	1.60	1.60	1.60	1.64	1.61
1907	1.70	1.70	1.70	1.70	1.70
1908	1.70	1.67	1.60	1.60	1.64
1909	1.47	1.26	1.39	1.53	1.41
1910	1.55	1.49	1.39	1.38	1.45
1911	1.40	1.38	1.31	1.14	1.31

[1] Premiums for prompt delivery.

Structural shapes.

[Beams and channels, 3-inch to 15-inch, Pittsburgh.]

AVERAGED FROM DAILY QUOTATIONS.

	1909	1910	1911
January	1.60	1.55	1.40
February	1.40	1.55	1.40
March	1.30	1.55	1.40
April	1.25	1.51	1.40
May	1.22	1.50	1.40
June	1.28	1.45	1.35
July	1.34	1.42	1.35
August	1.40	1.40	1.35
September	1.45	1.40	1.33
October	1.50	1.40	1.23
November	1.53	1.40	1.14
December	1.55	1.40	1.13
Year	1.40	1.46	1.32

Structual shapes—Continued.

QUARTERLY AVERAGES OF QUOTATIONS.

	First.	Second.	Third.	Fourth.	Year.
1894	1.21	1.20	1.27	1.25	1.23
1895	1.21	1.25	1.56	1.58	1.40
1896	1.44	1.49	1.55	1.50	1.49
1897	1.55	1.33	.98	1.09	1.24
1898	1.15	1.15	1.19	1.20	1.17
1899	1.35	1.60	2.12	2.25	1.83
1900	2.25	2.21	1.68	1.50	1.91
1901	1.51	1.60	1.60	1.60	1.58
1902	1.60	1.60	1.60	1.60	1.60
1903	1.60	1.60	1.60	1.60	1.60
1904	1.60	1.60	1.55	1.41	1.54
1905	1.55	1.60	1.63	1.70	1.62
1906	1.70	1.70	1.70	1.70	1.70
1907	1.70	1.70	1.70	1.70	1.70
1908	1.70	1.68	1.60	1.60	1.64
1909	1.43	1.25	1.40	1.53	1.40
1910	1.55	1.49	1.41	1.40	1.46
1911	1.40	1.38	1.34	1.17	1.32

Bars, plates, shapes.

[Historic official price changes.]

Merchant steel bars, base, Pittsburgh:	Bessemer.	Open hearth.
Mar. 1, 1902	1.60	1.70
Nov. 6, 1903	1.30	1.40
Mar. 14, 1904	1.35	1.40
Sept. 19, 1904	1.30	1.35
Dec. 20, 1904	1.40	1.40
Feb. 28, 1905	1.50	1.50
Nov. 15, 1906	1.60	1.60
June 1, 1908	1.40	1.40
Feb. 19, 1909	Open market.	

Steel tank plates, Pittsburgh:	Open hearth.
Apr. 4, 1901	1.60
Sept. 6, 1904	1.40
December 20, 1904	1.50
Feb. 16, 1905	1.60
Nov. 26, 1906	1.70
June 9, 1908	1.60
Feb. 19, 1909	Open market.
Beams and channels, 3-inch, to 15-inch, Pittsburgh:	
Apr. 1, 1901	1.60
Sept. 6, 1904	1.40
Dec. 19, 1904	1.50
Feb. 16, 1905	1.60
Aug. 31, 1905	1.70
June 9, 1908	1.60
Feb. 19, 1909	Open market.

Bar iron.

[Best refined bar iron from store, Philadelphia; annual averages, compiled by the American Iron and Steel Association, from sales books prior to 1887, from quotations since.]

1844	3.82
1845	4.19
1846	4.10
1847	3.84
1848	3.55
1849	3.01
1850	2.66
1851	2.44
1852	2.62
1853	3.73
1854	4.09
1855	3.33
1856	3.30
1857	3.17
1858	2.78
1859	2.72
1860	2.62
1861	2.72
1862	3.14
1863	4.06
1864	6.50
1865	4.75
1866	4.38
1867	3.89
1868	3.82
1869	3.65
1870	3.52
1871	3.51
1872	4.36
1873	3.87
1874	3.03
1875	2.72
1876	2.32
1877	2.03
1878	1.97
1879	2.31
1880	2.70
1881	2.59
1882	2.74
1883	2.25
1884	1.97
1885	1.80
1886	1.92
1887	2.20
1888	2.01
1889	1.94
1890	2.05
1891	1.90
1892	1.87
1893	1.70
1894	1.34
1895	1.44
1896	1.40
1897	1.31
1898	1.28
1899	2.07
1900	1.96
1901	1.84
1902	2.13
1903	2.00
1904	1.72
1905	1.92
1906	1.98
1907	2.11
1908	1.70
1909	1.76
1910	1.85
1911	1.64

Common iron bars.

[Annual average of quotations, base, Pittsburgh or Chicago.]

Year.	Pittsburgh.	Year.	Pittsburgh.
1845	4.3	1869	3.5
1846	4.1	1870	3.3
1847	3.8	1871	3.4
1848	3.5	1872	4.6
1849	3.0	1873	3.6
1850	2.7	1874	2.8
1851	2.4	1875	2.5
1852	2.6	1876	2.5
1853	4.0	1877	2.0
1854	3.5	1878	2.0
1855	3.0	1879	2.5
1856	3.0	1880	2.75
1857	4.3	1881	2.32
1858	4.3	1882	2.41
1859	3.7	1883	1.99
1860	3.6	1884	1.77
1861	2.3	1885	1.65
1862	3.5	1886	1.72
1863	4.5	1887	1.96
1864	[1] 6.7	1888	1.80
1865	5.3	1889	1.77
1866	5.0	1890	1.85
1867	4.5	1891	1.70
1868	3.7	1892	1.61

Year.	Pittsburgh.	Chicago.	Year.	Pittsburgh.	Chicago.
1893	1.55	1.47	1903	1.64	1.65
1894	1.13	1.10	1904	1.32	1.41
1895	1.16	1.25	1905	1.65	1.65
1896	1.11	1.30	1906	1.65	1.71
1897	1.00	1.11	1907	1.73	1.78
1898	.95	1.05	1908	1.47	1.56
1899	1.71	1.80	1909	1.49	1.42
1900	1.64	1.75	1910	1.53	1.44
1901	1.46	1.58	1911	1.30	1.21
1902	1.74	1.71			

[1] Record high, December, 1864, 7.50; gold in 1864, 262.

Iron and steel exports.

[Tonnage lines exclude ore; include scrap, pig iron, unfinished steel, rolled iron and steel, structural, wire and nails; pipes and fittings since July 1, 1905; nontonnage lines include hardware, cutlery, machinery, etc.; not agricultural implements, which are separately stated.]

	Tonnage (gross tons).	Tonnage value.	Nontonnage value.	Total value.	Agricultural implements.
1898	901,427	$18,095,244	$64,676,306	$82,771,550	$9,073,384
1899	942,689	25,162,220	80,526,857	105,689,077	13,594,524
1900	1,154,284	42,518,072	87,115,408	129,633,480	15,979,909
1901	700,857	29,050,446	73,484,129	102,534,575	16,714,308
1902	372,398	20,996,450	76,895,586	97,892,036	17,981,597
1903	326,590	20,452,839	78,583,026	99,035,865	22,951,805
1904	1,167,710	42,551,109	86,002,504	128,553,613	21,654,892
1905	1,010,255	42,104,348	100,824,165	142,928,513	22,124,312
1906	1,325,740	52,215,089	120,340,499	172,555,588	24,744,762
1907	1,301,979	60,046,221	137,020,560	197,066,781	25,597,272
1908	964,242	43,397,323	107,715,791	151,113,114	25,264,939
1909	1,243,462	50,783,138	106,897,193	157,680,331	27,327,428
1910	1,535,698	63,276,714	137,995,189	201,271,903	31,291,351
1911 [1]	2,185,000	87,000,000	163,000,000	250,000,000	35,000,000

[1] December estimated.

Wire nail cards.

	Apr. 13, 1886.[1]	Apr. 11, 1892.	July 19, 1895.	Dec. 1, 1896.
60	Base.	Base.	0.50	Base.
50	Base.	0.10	.50	Base.
30–40	Base.	.25	.50	Base.
20	Base.	.35	.50	Base.
12–16	Base.	.45	.50	0.05
10	Base.	.50	.50	.05
8–9	0.35	.60	.60	.10
6–7	.75	.75	.75	.20
4–5	1.10	.90	.90	.30
3	2.25	1.20	1.20	.45
2	4.00	1.60	1.60	.70

[1] First wire-nail card; base price, $4.25.

Nail production.

[Kegs, 100 pounds.]

	Cut nails.	Wire nails.	Total.
1896	1,615,870	4,719,860	6,335,730
1897	2,106,799	8,997,245	11,104,044
1898	1,572,221	7,418,475	8,990,696
1899	1,904,340	7,618,130	9,522,470
1900	1,573,494	7,233,979	8.807,473
1901	1,542,240	9,803,822	11,346,062
1902	1,633,762	10,982,246	12,616,008
1903	1,435,893	9,631,661	11,067,554
1904	1,283,362	11,926,661	13,210,023
1905	1,357,549	10,854,892	12,212,441
1906	1,189,239	11,486,647	12,675,886
1907	1,109,138	11,731,044	12,840,182
1908	956,182	10,662,972	11,619,154
1909	1,207,597	13,916,053	15,123,650
1910	1,005.233	12,704,902	13,710,135

	Kegs.
Maximum production cut nails, 1886	8,160,973
Maximum production wire nails, 1909	13,916,053

Plain wire, wire nails, and barb wire. (Pittsburgh.)

	Plain wire.		Wire nails.		Painted barb wire.		Galvanized barb wire.	
	High.	Low.	High.	Low.	High.	Low.	High.	Low.
1894	1.40	1.20	1.15	0.85	1.75	1.40	2.15	1.85
1895	1.75	1.10	[1] 2.25	[2] .85	2.30	1.45	2.70	1.80
1896	1.35	1.15	[3] 2.55	[4] 1.45	1.75	1.40	2.05	1.70
1897	1.20	1.10	1.50	1.25	1.50	1.30	1.80	1.60
1898	1.25	1.10	1.50	1.25	1.50	1.35	1.80	1.65
1899	2.80	1.20	2.95	1.35	3.40	1.45	3.55	1.80
1900	3.05	2.15	3.20	2.20	3.65	2.50	3.80	2.80
1901	2.25	1.85	2.30	1.90	2.60	2.50	2.90	2.80
1902	2.00	1.75	2.05	1.85	2.60	2.15	2.90	2.45
1903	1.90	1.75	2.00	1.85	2.30	2.15	2.60	2.45
1904	1.85	1.45	1.90	1.60	2.25	1.75	2.55	2.05
1905	1.65	1.60	1.80	1.70	1.95	1.90	2.25	2.20
1906	1.85	1.65	2.00	1.75	2.15	1.95	2.45	2.25
1907	1.90	1.85	2.05	2.00	2.20	2.15	2.50	2.45
1908	1.90	1.80	2.05	1.95	2.20	2.10	2.50	2.40
1909	1.80	1.40	1.95	1.60	2.10	1.60	2.40	1.90
1910	1.65	1.50	1.85	1.70	1.85	1.70	2.15	2.00
1911	1.60	1.30	1.80	1.50	1.80	1.50	2.10	1.80

[1] On temporary high card, equal to 2.75 on either old or present card.
[2] On old card, equal to 0.35 on temporary card; (actual range in the year, 1.90).
[3] On temporary high card.
[4] In December, on present card; low on temporary high card, 2.25c. in January.

Plate and sheet production.

	1894	1895	1896	1897
Plates: 8-heavier	375,117	508,343	458,136	597,549
Sheets:				
9—19	80,099	112,537	113,826	107,891
20—25	73,968	91,449	89,760	96,930
26-lighter	153,716	279,130	304,054	404,916
Total sheets	307,783	483,116	507,640	609,737

	1898.
Plates, No. 8 and heavier	638,861
Sheets, Nos. 9 to 17	117,505
Sheets, No. 18 and lighter	691,935
Total sheets, No. 9 and lighter	809,440

	Plates, 12 down.	Sheets, 13 up.	Black plates.	Total sheets and black plates.
1905	2,041,206	983,437	507,587	1,491,024
1906	2,531,552	1,074,525	576,079	1,650,604
1907	2,660,060	1,084,700	504,072	1,588,722
1908	1,271,021	864,901	513,771	1,378,672
1909	2,379,098	1,248,404	606,844	1,855,248
1910	2,807,728	1,435,619	712,137	2,147,756

NOTE.—Gross tons throughout. No separate statistics were collected prior to 1894, or between 1898 and 1905; above statistics, 1894–1898, include black plates; total plate, sheet and black plate production and separate black plate production shown elsewhere.

Sheets.

[Black sheets, 28 gauge, Pittsburgh.]

	High.	Low.		High.	Low.
1896	2.45	2.15	1904	2.30	2.00
1897	2.15	1.95	1905	2.40	2.15
1898	2.05	1.90	1906	2.60	2.30
1898	2.05	1.85	1907	2.60	2.45
1899	3.35	2.00	1908	2.60	2.45
1900	3.25	2.90	1909	2.40	2.15
1901	3.85	3.00	1910	2.40	2.15
1902	3.10	2.75	1911	2.20	1.80
1903	2.70	2.35			

[Official price changes, with dates; principal periods of open price competition indicated; flat sheets per pound, corrugated per square, 28 gauge; all f. o. b. mill, Pittsburgh.]

	Flat sheets.		Corrugated.	
	Black.	Galvanized.	Painted.	Galvanized.
Dec. 8, 1904	2.20	3.35	1.60	2.75
Dec. 22, 1904	2.30		1.65	2.85
Feb. 9, 1905		3.45		2.95
Mar. 16, 1905	2.40		1.75	
Competition, low	2.15	3.20	1.55	2.80
Nov. 20, 1905	2.30	3.35	1.65	2.95
Jan. 8, 1906	2.40	3.45		3.00
June 5, 1906	2.50	3.55	1.75	3.10
Oct. 25, 1906	2.60	3.65	1.85	3.15
Jan. 24, 1907		3.75		3.25
Jan. 6, 1908	2.50	3.55	1.75	3.10
Feb. 24, 1909	2.20	3.25	1.65	2.90
Competition, low	2.15	3.15	1.50	2.70
Sept. 28, 1909	2.30	3.35	1.60	2.85
Nov. 12, 1909	2.40	3.50	1.70	3.00

Tin plate production.

[Col. Ayer's reports through 1896; American Iron & Steel Association reports for subsequent years; Col. Ayer's reports covered black plate for all purposes; association reports designate "Black plate for tinning."]

	Tin and terne plate.	Black plate.		Tin and terne plate.	Black plate.
1891	999	3,919	1902	360,000	365,743
1892	18,803	18,071	1903	480,000	490,652
1893	55,182	31,997	1904	458,000	472,569
1894	74,260	56,159	1905	493,500	507,587
1895	113,666	124,252	1906	577,562	576,079
1896	160,362	163,924	1907	514,775	504,072
1897	256,598	271,886	1908	537,087	513,771
1898	326,915	345,254	1909	612,951	606,844
1899	360,875	375,000	1910	772,770	712,137
1900	302,665	315,000	1911	[1] 700,000	[1] 700,000
1901	399,291	398,026			

[1] Estimated.

Tin plate prices.

Average yearly price of J.B. grade coke tin plates, 14 by 20 I. C., 108 pounds delivered at New York:	
1880	$6.75
1881	5.45
1882	5.30
1883	5.10
1884	4.70
1885	4.40
1886	4.30
1887	4.60
1888	4.55
1889	4.55
Imported Bessemer cokes, 14 by 20, 108 pounds:	
1890	4.80
1891	5.34
1892	5.30
1893	5.37
1894	4.89
1895	3.87
American Bessemer cokes, 14 by 20, 108 pounds:	
1896	3.63
1897	3.26
1898	2.99
1899	4.41
1900	4.82
1901	4.35
1902	4.28
1903	4.09
1904	3.76
1905	3.85
1906	4.04
1907	4.25
1908	4.05
1909	3.83
1910	3.91
1911	3.92

Tin plate price changes.

Changes in prices per box 14 x 20 prime Bessemer coke tin plate, f. o. b. mill, Pittsburgh district, with prices of pig tin, New York, and sheet bars, Pittsburgh, same date.

	Tin plates.	Tin.	Sheet bars.
Jan. 6, 1899	3.00	20.75	17.50
Jan. 26, 1899	3.25	24.50	18.50
Feb. 17, 1899	3.50	23.75	22.00
Mar. 8, 1899	3.87½	23.70	25.00
July 14, 1899	4.37½	29.12½	33.50
Aug. 6, 1899	4.65	31.25	36.00
Sept. 24, 1900	4.00	28.62½	22.00
Nov. 3, 1902	[1] 3.60	26.75	31.75
Mar. 3, 1903	[1] 3.80	30.80	31.50
Nov. 16, 1903	[1] 3.60	25.40	24.00
Jan. 25, 1904	[1] 3.45	28.20	24.00
July 25, 1904	[1,2] 3.30	27.10	24.00
Nov. 15, 1904	[1] 3.45	29.15	22.50
Dec. 22, 1904	[1] 3.55	29.25	23.00
Oct. 3, 1905	[1] 3.35	32.60	26.00
Oct. 20, 1905	[1] 3.45	32.60	26.00
Nov. 20, 1905	[1] 3.40	33.55	26.00
Jan. 8, 1906	[1] 3.50	36.25	26.00
Apr. 10, 1906	[1] 3.60	38.75	28.00
May 10, 1906	[1] 3.75	44.75	28.00
Oct. 25, 1906	[1] 3.90	43.25	30.00
Jan. 6, 1908	3.70	27.35	29.00
Mar. 10, 1909	3.40	28.70	25.00
Sept. 28, 1909	3.50	30.85	27.50
Nov. 12, 1909	3.60	30.50	28.50
Feb. 3, 1911	3.70	41.40	24.00
Aug. 12, 1911	3.60	43.00	22.00
Oct. 16, 1911	3.40	41.70	21.00

[1] Subject to 5-cent rebate. [2] Cash discount changed from 1 to 2 per cent.

Production of steel ingots and castings.

[Gross tons.]

	Basic open hearth.	Acid open hearth.	Total open hearth.	Bessemer.	Crucible.	Unclassified.	Total steel.
1896	776,256	522,444	1,298,700	3,919,906	60,689	2,394	5,281,639
1897	1,056,043	552,628	1,608,671	5,475,315	69,959	3,012	7,156,957
1908	1,569,412	660,880	2,230,292	6,609,017	89,747	3,801	8,932,857
1899	2,080,426	866,890	2,947,316	7,586,354	101,213	4,974	10,639,857
1900	2,545,091	853,044	3,398,135	6,684,770	100,562	4,862	10,188,329
1901	3,618,993	1,037,316	4,656,309	8,713,302	98,513	5,471	13,473,595
1902	4,496,533	1,191,196	5,687,729	9,138,363	112,772	8,386	14,947,250
1903	4,734,913	1,094,998	5,829,911	8,592,829	102,434	9,804	14,534,978
1904	5,106,367	801,799	5,908,166	7,859,140	83,391	9,190	13,859,887
1905	7,815,728	1,155,648	8,971,376	10,941,375	102,233	8,963	20,023,947
1906	9,658,760	1,321,653	10,980,413	12,275,830	127,513	14,380	23,398,136
1907	10,279,315	1,270,421	11,549,736	11,667,549	131,234	14,075	23,362,594
1908	7,140,425	696,304	7,836,729	6,116,755	63,631	6,132	14,023,247
1909	13,417,472	1,076,464	14,493,936	9,330,783	107,355	22,947	23,955,021
1910	15,292,329	1,212,180	16,504,509	9,412,772	122,303	55,335	26,094,919

Production of rolled iron and steel.

[Gross tons.]

Year.	Iron and steel rails.	Plates and sheets.	Wire rods.	Structural shapes.	Nail plate.	Bars, hoops, and all other.	Total.
1891	1,307,176	678,927	536,607		223,312	2,644,941	5,390,963
1892	1,551,844	751,460	627,829	453,957	201,242	2,579,482	6,165,814
1893	1,136,458	674,345	537,272	387,307	136,113	2,104,190	4,975,685
1894	1,021,772	682,900	673,402	360,305	108,262	1,795,570	4,642,211
1895	1,306,135	991,459	791,130	517,920	95,085	2,487,845	6,189,574
1896	1,122,010	965,776	623,986	495,571	72,137	2,236,361	5,515,841
1897	1,647,892	1,207,286	970,736	583,790	94,054	2,497,970	7,001,728
1898	1,981,241	1,448,301	1,071,683	702,197	70,188	3,239,760	8,513,370
1899	2,272,700	1,903,505	1,036,398	850,376	85,015	4,146,425	10,294,419
1900	2,385,682	1,794,528	846,291	815,161	70,245	3,575,536	9,487,443
1901	2,874,639	2,254,425	1,365,934	1,013,150	68,850	4,772,329	12,349,327
1902	2,947,933	2,665,409	1,574,293	1,300,326	72,936	5,383,219	13,944,116
1903	2,992,477	2,599,665	1,503,455	1,095,813	64,102	4,952,185	13,207,697
1904	2,284,711	2,421,398	1,699,028	949,146	61,601	4,597,497	12,013,381
1905	3,375,929	3,532,230	1,808,688	1,660,519	64,542	6,398,107	16,840,015
1906	3,977,887	4,182,156	1,871,614	2,118,772	54,211	7,383,828	19,588,468
1907	3,633,654	4,248,832	2,017,583	1,940,352	52,027	7,972,374	19,864,822
1908	1,921,015	2,649,693	1,816,949	1,083,181	45,747	4,311,608	11,828,193
1909	3,023,845	4,234,346	2,335,685	2,275,562	63,746	7,711,506	19,644,690
1910	3,636,031	4,955,484	2,241,830	2,266,890	45,294	8,475,750	21,621,279

Rolled iron and steel.

[Gross tons.]

	1909			1910		
	Iron.	Steel.	Total.	Iron.	Steel.	Total.
Rails		3,023,845	3,023,845	230	3,635,801	3,636,031
Structural shapes	44,814	2,230,748	2,275,562	426	2,266,464	2,266,890
Plates, 12 and heavier	32,332	2,346,766	2,379,098	37,763	2,769,965	2,807,728
Sheets, 13 and lighter	43,870	1,811,378	1,855,248	53,355	2,094,401	2,147,756
Merchant bars	952,230	2,311,301	3,263,531	1,074,163	2,711,568	3,785,731
Concrete reenforcing bars		159,352	159,352	4,645	236,464	241,109
Sheet piling	(1)	(1)	(1)		26,598	26,598
Railroad ties	(1)	(1)	(1)		49,048	49,048
Hoops	4,018	246,161	250,179		262,214	262,214
Bands and cotton ties	4,118	391,215	395,333		424,979	424,979
Splice bars	12,912	187,371	200,283	14,352	208,670	223,022
Wire rods		2,335,685	2,335,685	627	2,241,203	2,241,830
Skelp, flue, etc	370,151	1,663,230	2,033,381	350,578	1,477,616	1,828,194
Nail and spike plates	15,924	47,822	63,746	11,366	33,928	45,294
Forging blooms and billets	376	341,397	341,773	202	459,731	459,933
All other finished rolled	228,686	838,988	1,067,674	192,449	982,473	1,174,922
Total	1,709,431	17,935,259	19,644,690	1,740,156	19,881,123	21,621,279

[1] Included in structural.

World's pig-iron production.

[Reduced to tons, 2,240 pounds.]

	1850	1890	1900	1905	1909	1910
United States	563,755	9,202,703	13,789,242	22,992,380	25,795,471	27,303,567
Germany	350,000	4,584,882	8,381,373	10,813,979	12,426,048	14,002,565
Great Britain	2,300,000	7,904,214	8,959,691	9,592,737	9,664,287	10,216,745
France	405,653	1,931,188	2,669,966	3,028,089	3,488,621	3,968,732
Russia	227,555	912,561	2,889,789	2,977,981	2,829,388	2,994,221
Austria-Hungary	250,000	910,685	1,472,695	[1] 1,560,000	2,012,264	2,100,000
Belgium	144,452	775,385	1,001,872	1,290,400	1,606,553	1,774,998
Canada		19,439	86,090	468,003	677,090	740,210
Sweden	150,000	483,155	518,263	518,967	437,735	594,750
Spain		176,598	289,315	397,402	[1] 400,000	[1] 400,000
Italy			[1] 15,000	140,818	204,516	[1] 200,000
Japan				47,613	[1] 150,000	[1] 150,000
Other countries	10,000	80,000	100,000	200,000	200,000	200,000
Total	4,401,415	26,980,810	40,173,296	54,018,369	59,891,973	64,645,788

[1] Estimated.

Estimate for 1911, 62,000,000 tons.

RYERSON CONTRACT.

Whereas, J. T. Ryerson & Son, of Chicago, Ill., hereinafter referred to as party of the second part, has been engaged in the sale of structural material, merchant bar steel, and plates for a long term of years and has established in Chicago large warehouses for storing and shipping such materials and has built up, through its selling organization, a large trade throughout the United States to which said materials are sold, such trade being known as a "jobbers' trade," and,

Whereas, it now desires to enter into an agreement with some one manufacturer exclusively, to supply its requirements of said materials for this trade, and,

Whereas, the Illinois Steel Co., of Chicago, Ill., hereinafter referred to as party of the first part, manufactures certain kinds and sizes of these materials, and, through arrangement with the Carnegie Steel Co., of Pittsburgh, Pa., can supply other kinds and sizes of these materials, and is desirous of entering into an agreement with the said second party for supplying the trade of the second party with structural material, merchant bar steel, and plates.

Therefore, the following agreement is entered into this ——— day of June, 1909, to wit:

Party of the first part hereby agrees to ship to the warehouses of the second party in Chicago, Ill., such of the above-named materials of such kinds and sizes as are made by the party of the first part or by the Carnegie Steel Co., of Pittsburgh, Pa., as the party of the second part may order from time to time. The said materials so ordered and shipped to be stored in the warehouse of the second party in Chicago, Ill., in an orderly manner, so as to permit of conveniently and accurately taking inventory of said materials at any time.

It is understood and agreed by the parties hereto that at no time during the term of this agreement shall the aggregate stocks of said materials in the said warehouses be greater in the total quantity than 20,000 net tons.

On the first day that this agreement becomes operative and on the first day of each calendar month thereafter during the continuance of this agreement, the party of the first part shall stipulate in writing the prices at which it will sell said second party the said materials stored in said warehouses for the ensuing calendar month, and shall stipulate the length of time during which sales and deliveries may be made by the party of the second part from the said stock at the stipulated prices.

On the 15th day of each calendar month succeeding date of this agreement the said second party shall pay to the said first party for all of the said materials shipped by it from said stock at the prices stipulated by the said first party as above provided. Such shipments of said materials from said warehouses by the party of the second part to be paid for in accordance with the weights of said materials as they were shipped from the mills of the said first party, or from the mills of the said Carnegie Steel Co., to the said warehouses, and in case said second party elects to cut or shear any of the said materials into different lengths and weights than those in which the said materials were shipped from the said mills, the said second party shall bear the expense of shearing or cutting, including the value of the discarded materials. The said second party shall render an account daily to the said first party of any and all shipments of said materials from the said warehouses. And at any time during the term of this agreement said first party may call for the taking of an inventory of said materials within the said warehouses for the purpose of verifying quantities shipped from the said materials so stored; the said second party hereby agrees to take such inventory when called for, in the presence of a representative of the first party and render statement thereof to the first party.

The party of the second part hereby agrees to use its best effort and ability in selling such materials so stored in its warehouses to that class of customers known as "jobbers' trade." And it further agrees that all sales of such materials made by it or through its organization shall be delivered from the said materials in said warehouses, and it is distinctly understood and agreed hereby that no sales of such materials by said second party or by any part of its organization shall be shipped or supplied from any other source than the said materials so stored in said warehouses.

In consideration of the services so rendered by the party of the second part the party of the first part agrees to pay the party of the second part, when such materials are sold and shipped from the said warehouses by the party of the second part, the following rates of commission:

When the price of merchant bar steel, stipulated by the party of the first part, as herein provided, is not lower than $1.38 base per hundred pounds, f. o. b. cars Chicago, and the price of structural material and plates, stipulated by the party of the first part, as herein provided, is not lower than $1.48 base per hundred pounds, f. o. b. cars Chicago, a commission of $1.50 per net ton; and when the price of merchant bar steel, stipulated by the first party, as herein provided, is not lower than $1.58 base per hundred pounds, f. o. b. cars Chicago, and the price of structural material and plates stipulated by the first party, as herein provided, is not lower than $1.68 base per hundred pounds, f. o. b. cars Chicago, a commission of $2 per net ton. The payment of these commissions to be made by the first party to the second party on the 15th day of each month following the date of this agreement for all of the said materials sold and shipped by the second party from the said warehouses during the previous month.

It is further agreed and understood that when the prices or price stipulated by the first party, as herein provided, are or is below $1.38 base for merchant bar steel, and $1.48 base for structural material and plates, f. o. b. cars Chicago, the first party is to pay the second party no commission or compensation of any kind for selling and shipping such materials from said warehouses.

This agreement to continue in effect until terminated as herein provided. Each party hereto reserves the right to terminate this agreement by giving written notice to the other party 60 days prior to the date of termination.

If and when such notice of termination is given by either party, the second party may, at its option, exercise within 10 days thereafter, by notice in writing to the first party, purchase all of said materials remaining in said warehouses unsold at the date of termination, at the prices stipulated by the party of the first part, as herein provided, on the first day of the month prior to such notice of cancellation. In the event that said second party does not elect to exercise such option of purchase, then at the date of termination the said second party will, at its own expense, load on cars and ship to the first party all of said materials remaining in said warehouses and unsold at the date of the termination of this agreement.

It is further understood and agreed that if said second party desires to use any of the said materials or to have them so used for what is termed fabricating purposes, such materials may be so used, and are to be paid for by the second party at the prices stipulated from time to time by the first party, as herein provided, but no commission or allowance of any kind is to be paid the second party on account of such materials so used.

United States Steel Corporation shipments.

	Cars.	Pounds.	Revenue to Missouri River.	Elgin, Joliet & Eastern proportion.
Originating at Joliet, delivered to Atchison, Topeka & Santa Fe Railway at Joliet July, 1909, to June, 1911, inclusive:				
1909.				
July	99	4,284,222	$10,219.01	$173.50
August	48	2,265,713	4,724.83	96.00
October	49	2,222,834	4,183.63	98.00
November	55	2,296,555	5,096.78	110.00
December	30	1,713,891	2,283.87	60.00
1910.				
January	81	3,801,463	6,485.16	160.00
February	50	2,292,789	4,777.86	102.00
March	34	1,481,155	2,734.84	68.00
April	54	2,629,021	4,997.12	108.00
May	58	2,585,151	4,702.41	114.00
June	32	1,344,640	2,253.72	58.00
July	38	1,874,347	3,235.51	76.00
August	51	2,713,438	3,957.52	102.00
September	53	2,413,330	3,582.94	106.00
October	52	2,463,505	4,067.36	104.00
November	36	1,692,859	3,301.11	72.00
1911.				
January	17	913,844	1,369.31	36.00
February	37	1,671,064	3,091.45	74.00
March	36	1,659,920	2,841.86	72.00
April	36	1,704,909	3,159.00	895.91
April and May	38	1,779,103	3,092.04	554.36
May	16	671,928	1,146.82	257.56
June	35	1,705,103	2,510.72	510.36
Total	1,035	48,180,784	87,814.87	4,007.69

United States Steel Corporation shipments—Continued.

	Cars.	Pounds.	Revenue to Missouri River.	Elgin, Joliet & Eastern proportion.
Originating at South Chicago, delivered to Atchison, Topeka & Santa Fe Railway at Joliet July, 1909, to June, 1911, inclusive:				
1909.				
June	25	260,140	$1,684.36	$375.36
July	15	913,391	1,676.66	419.72
August	7	406,036	929.66	227.05
September	10	620,433	1,092.97	139.87
October	7	584,405	1,230.04	332.27
November	14	701,266	1,162.71	336.44
December	35	2,423,217	2,725.30	914.24
1910.				
January	44	2,974,010	4,007.97	1,275.28
February	37	2,458,063	3,851.50	928.62
March	71	4,955,273	7,506.40	1,699.17
April	61	4,032,934	4,725.07	1,106.26
May	17	1,256,245	1,358.34	312.29
June	38	3,190,837	3,582.28	840.14
July	31	2,048,725	1,760.62	436.35
August	9	582,295	783.01	159.23
September	46	3,616,015	2,611.34	649.23
October	40	2,552,998	2,433.65	598.78
November	6	463,209	361.68	87.39
December	20	1,255,720	1,649.26	428.27
1911.				
January	6	381,432	660.76	197.84
February	9	422,536	762.01	189.25
March	7	462,789	419.87	99.40
April	21	1,580,552	1,393.87	339.02
May	20	1,508,765	1,202.64	328.26
June	33	2,620,439	2,319.62	622.44
Total	629	42,271,725	51,891.59	13,042.17
Originating at Waukegan, delivered to Atchison, Topeka & Santa Fe Railway at Joliet July, 1909, to June, 1911, inclusive:				
1909.				
June	34	1,352,286	2,759.86	580.96
July	36	1,534,815	2,541.87	517.63
August	30	1,263,342	2,380.33	489.10
September	30	1,272,409	2,265.91	385.36
October	17	587,417	984.01	201.44
November	20	822,654	1,761.11	344.47
December	50	2,285,898	3,917.98	757.29
1910.				
January	25	1,095,571	1,920.80	399.30
February	12	414,215	863.89	173.96
March	19	819,851	1,576.30	262.72
April	29	1,055,948	1,937.18	377.26
May	10	413,704	680.79	137.64
June	17	762,239	1,395.21	279.70
July	10	375,266	852.78	160.48
August	16	684,396	1,117.04	245.80
September	21	835,828	1,699.18	344.00
October	18	727,036	1,095.80	238.72
November	21	818,887	1,473.95	290.17
December	11	497,073	995.68	199.47
1911.				
January	8	353,908	728.87	146.63
February	9	403,918	585.34	128.05
March	23	994,016	1,535.66	310.10
April	30	1,105,059	2,041.09	674.41
May	36	1,421,425	2,114.95	612.31
June	30	1,177,628	1,809.51	614.45
Total	562	23,074,789	41,035.09	8,871.32

United States Steel Corporation shipments—Continued.

	Cars.	Pounds.	Revenue to Missouri River.	Elgin, Joliet & Eastern proportion.
Originating at Gary, delivered to Atchison, Topeka & Santa Fe Railway at Joliet, July 1909, to June, 1911, inclusive:				
1909.				
June	1	67,915	$76.40	$16.30
September	15	704,640	503.60	125.65
November	1	79,780	56.22	12.81
December	1	77,700	50.20	12.42
1910.				
January	1	83,000	224.10	54.77
February	2	215,800	582.66	144.41
March	6	476,020	1,122,87	265.04
April	2	137,468	218.87	50.10
May	29	1,602,464	2,078.81	470.13
June	7	519,955	846.09	155.54
July	3	204,520	174.85	34.97
1911.				
January	3	153,395	110.76	27.69
February	8	469,645	349.87	79.23
March	26	1,877,825	1,240.24	302.38
June	1	45,526	122.92	30.73
Total	106	6,715,653	7,758.46	1,782.17
Originating at Buffington, delivered to Atchison, Topeka & Santa Fe Railway at Joliet July, 1909, to June, 1911, inclusive:				
1909.				
July	3	209,000	158.65	41.80
August	1	76,000	49.40	15.20
September	5	332,500	254.12	66.50
November	2	114,000	85.50	22.80
1910.				
March	4	222,300	259.83	49.06
April	2	97,280	106.00	27.24
May	1	57,000	62.70	15.96
August	3	122,360	113.70	27.57
September	1	40,280	44.31	11.08
October	....	47,500	49.88	12.34
Total	22	1,318,220	1,184.09	289.55
Grand total	2,354	121,561,171	189,683.10	31,584.00

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908.

[County auditor's office.]

CITY OF ELY.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real-estate tax.	Personal tax.	Total tax.
									Cents.			*Mills.*			
Sibley	Oliver Iron Mining Co.	Lot 1 (balance in Morse).	12	27	63	12	34	....	....	$1,000	(1)	47.1	$47.10	....	$47.10
Pioneer	do	NE. ¼ of SW. ¼, except railway right of way 1.23 acres, W. ½ of SW. ¼, except railway right of way and except 100 by 135 feet for M.E. Church, and except 0.31 acre deed to Peter Sture, SE. ¼ of S. W ¼, except railway right of way, 1.31 acres.	12	27	63	12	157.25	4,479,127	23	1,030,199	$69,768	47.1	48,522.38	$3,286.07	51,808.45
Zenith	do	N. ½ of SE. ¼, except railway right of way.	12	27	63	12	67.89	2,050,299	23	471,569	19,237	47.1	22,210.90	906.06	23,116.96
Chandler	do	NE. ¼ of SE. ¼, except railway right of way.	12	28	63	12	39.42	43,221	23	9,941	10,225	47.1	468.22	481.60	949.82
		SE. ¼ of SE. ¼, except railway right of way.	12	28	63	12	35.61								
Total								6,572,647	....	1,512,709	99,230	....	71,248.60	4,673.73	75,922.33

CITY OF EVELETH.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real-estate tax.	Personal tax.	Total tax.
Spruce	Oliver Iron Mining Co.	W. ½ of SE. ¼, leasehold int.	39	31	58	17	80	4,352,800	23	$1,001,144	$34,185	73.1	$73,183.63	$2,498.92	$75,682.55

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[1] Personal property assessed in town of Morse.

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

CITY OF VIRGINIA.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
									Cents.			*Mills.*			
Alpena	Oliver Iron Mining Co	Lot 3	22	5	58	17	40.14	2,644,180	15	$396,627		22.5	$8,924.11		$8,924.11
		Lot 4	22	5	58	17	40.34	2,830,823	15	424,623		22.5	9,554.02		9,554.02
Enterprise Prospect	do	SW. ¼ of NW. ¼	22	5	58	17	40	4,470,623	8	357,650		22.5	8,047.12		8,047.12
Sauntry	do	SE. ¼ of NW. ¼, NE. ¼ of SW. ¼, SE. ¼ of SW. ¼ (balance in Miss. Mt.).	22	5	58	17	120	20,000,000	15	3,000,000		22.5	67,500.00		67,500.00
Western Prospect	do	Lot 1	22	6	58	17	40.38	693,366	8	55,469		22.5	1,248.05		1,248.05
Columbia	Interstate Iron Co.	NE. ¼ of NW. ¼ (mineral lease).	22	8	58	17	40	2,500,000	19	475,000		22.5	10,687.50		10,687.50
Alberta	Alberta Iron Co.	NE. ¼ (mineral lease).	22	16	58	17	160	28,968	19	5,504	$4,800	22.5	123.84	$108.00	231.84
Minnewas Prospect	Oliver Iron Mining Co.	NW. ¼ and SW. ¼.	22	16	58	17	320	7,000,000	10	700,000		22.5	15,750.00		15,750.00
Rouchleau Prospect	do	NEx of NE. ¼ and SE. ¼ of NE. ¼.	22	17	58	17	80	26,413,000	10	2,641,300		22.5	59,429.25		59,429.25
Great Western Prospect.	do	SW. ¼ of SW. ¼	22	17	58	17	40	5,108,305	8	408,344		22.5	9,187.74		9,187.74
Auburn	do	N. ½ of NW. ¼, except railway right of way.	22	20	58	17	76	1,555,800	8	124,464		22.5	2,800.44		2,800.44
		SE. ¼ of SW. ¼, except railway right of way.	22	17	58	17	40								
Total								73,245,065		8,588,981	4,800		193,252.07	108.00	193,360.07

VILLAGE OF AURORA.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
Fowler	Interstate Iron Co.	Lot 2, except railway right of way.	13	3	58	15	33.68	585,000	19	$111,150	$3,546	25.7	$2,856.56	$91.13	$2,947.69
Meadow	do	Lot 3	13	3	58	15	35.82			10,000	5,381	25.7	257.00	138.29	395.29
Do	do	Lot 4	13	3	58	15	36.27			10,000		25.7	257.00		257.00
Do	do	SE. ¼ of NW. ¼	13	3	58	15	40	659,040	19	125,218		25.7	3,218.10		3,218.10
St. James	Corrigan-McKinney & Co.	NE. ¼ of SW. ¼ and S. ½ of SW. ¼	13	3	58	15	120			450,000	2,565	25.7	11,565.00	65.92	11,630.92
Miller	La Belle Iron Works.	NE. ¼ of SE. ¼	(1)	4	58	15	40	1,813,566	23	417,120	23,557	26.5	11,053.68	624.26	11,677.94
Do	do	NW. ¼ of SE. ¼	(1)	4	58	15	40	313,567	23	72,120		26.5	1,911.18		1,911.18

Canton Prospect	Oliver Iron Mining Co.	SE. ¼ of SE. ¼	(1)	4	58	15	40			20,000		26.5	530.00		530.00
Aurora Prospect	do	SW. ¼ of SE. ¼	(1)	4	58	15	40			20,000		26.5	530.00		530.00
Mohawk	Pickands, Mather & Co.	NE. ¼ of SW. ¼	(1)	4	58	15	40	1,397,549	19	265,535	11,675	26.5	7,036.68	309.39	7,346.07
Total								4,768,722		1,501,143	46,724		39,215.20	1,228.99	40,444.19

VILLAGE OF BIWABIK.

Biwabik	Biwabik Mining Co.	Lot 1	24	3	58	16	40.61	2,149,196	30	$644,759	$25,000	31.7	$20,438.86	$792.50	$21,231.36
Do	do	SE. ¼ of NE. ¼ (balance in town of Biwabik).	24	3	58	16	40	750,000	15	112,500		31.7	3,566.25		3,566.25
Canton	Oliver Iron Mining Co.	SW. ¼ of NE. ¼ (balance in town of Biwabik).	24	3	58	16	40	2,500,000	10	250,000		31.7	7,925.00		7,925.00
Duluth	do	Lot 2	24	3	58	16	40.56	248,544	14	34,796	1,290	31.7	1,103.03	40.89	1,143.92
Total								5,647,740		1,042,055	26,290		33,033.14	833.39	33,866.53

VILLAGE OF BUHL.

Sharon	Oliver Iron Mining Co.	SW. ¼ of SE. ¼	35	17	58	19	40	7,771,790	14	$1,088,050	$2,775	16.2	$17,626.40	$44.96	$17,671.36
Do	do	SW. ¼ of NE. ¼, except plat of Buhl, 17.89 acres.	35	20	58	19	22.11								
Do	do	NW. ¼ of NE. ¼, except railway right of way.	35	20	58	19	36.58	7,155,215	14	1,001,730		16.2	16,228.03		16,228.03
Wabigan Prospect	do	SE. ¼ of SE. ¼	35	17	58	19	40			20,000		16.2	324.00		324.00
Iron Chief	do	S. ½ of SW. ¼ NW. ¼ of NW. ¼ (balance in town of Great Scott).	35 35	17 20	58 58	19 19	120	2,522,509	10	252,251		16.2	4,086.47		4,086.47
Culver Prospect	do	NE. ¼ of NE. ¼, except railway right of way.	35	20	58	19	36.75	4,446,194	15	666,929		16.2	10,804.25		10,804.25
Grant	Interstate Iron Co.	NE. ¼ of NW. ¼, and S. ½ of NW. ¼ (balance in town of Great Scott).	35	20	58	19	120	6,000,000	23	1,380,000	54,000	16.2	22,356.00	874.80	23,230.80
Total								27,895,708		4,408,960	56,775		71,425.15	919.76	72,344.91

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[1] 13 S. L. to 24.

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

VILLAGE OF CHISHOLM.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
									Cents.			*Mills.*			
Alworth Prospect	Oliver Iron Mining Co.	E. ½ of NE. ¼	40	22	58	20	80	4,800,333	10	$480,633		22.0	$10,573.93		$10,573.93
Jordan	Corrigan - McKinney & Co.	W. ½ of NE. ¼	40	22	58	20	80			200,000	$3,200	22.0	4,400.00	$70.40	4,470.40
Seneca Prospect	Oliver Iron Mining Co.	E. ½ of SW. ¼	40	22	58	20	76.92	1,557,268	8	124,581		22.0	2,140.78		2,740.78
Crescent Prospect	do	Lot 3	40	22	58	20	38.42	1,950,000	8	156,000		22.0	3,432.00		3,432.00
Shenango	Shenango Furnace Co.	NE. ¼ of SE. ¼	40	22	58	20	40	1,773,279	19	336,923	25,591	22.0	7,412.31	563.00	7,975.31
Do	do	SE. ¼ of SE. ¼ (balance in town of Stuntz).	40	22	58	20	40	100,000	10	10,000		22.0	220.00		220.00
Myers	Oliver Iron Mining Co.	W. ½ of SE. ¼	40	22	58	20	80	4,522,351	19	859,247	22,762	22.0	18,903.43	500.76	19,404.19
Tioga Prospect	Shenango Furnace Co.	Lot 1, except railway right of way.	40	28	58	20	32.87	1,200,000	10	120,000		22.0	2,640.00		2,640.00
Chisholm	Oliver Iron Mining Co.	W. ½ of NE. ¼, except railway right of way.	40	28	58	20	73.90	6,263,183	23	1,440,532	33,761	22.0	31,691.70	742.74	32,434.44
Pearce	Meridan Iron Co.	NE. ¼ of NW. ¼, except railway right of way.	40	28	58	20	39.94	52,055	14	7,288	3,538	22.0	160.34	77.84	238.18
Clark	Oliver Iron Mining Co.	S. ½ of NW. ¼	40	28	58	20	80	3,620,808	23	832,786	37,425	22.0	18,321.29	823.35	19,144.64
Burt Prospect No. 2	do	NE. ¼ of SW. ¼, except railway right of way.	40	28	58	20	39.68	3,776,600	8	302,128		22.0	6,646.82		6,646.82
Leonard	do	NW. ¼ of SW. ¼	40	28	58	20	40	8,191,543	23	1,884,055	3,992	22.0	41,449.20	87.82	41,537.02
Do	do	SW. ¼ of SW. ¼	40	28	58	20	40	1,142,378	10	114,238		22.0	2,513.24		2,513.24
Tener	do	NW. ¼ of SE. ¼	40	28	58	20	40	7,729,676	10	772,968		22.0	17,005.30		17,005.30
Monroe	do	SE. ¼ of SE. ¼ NE. ¼ of SE. ¼	40 40	28 28	58 58	20 20	80	21,607,776	14	3,025,088	35,078	22.0	66,551.94	771.72	67,323.66
Do	do	SE. ¼ of NE. ¼	40	28	58	20	40	9,254,513	10	925,451		22.0	20,359.92		20,359.92
Shenango Prospect No. 3.		SW. ¼ of SE. ¼	40	28	58	20	40	900,000	8	72,000		22.0	1,584.00		1,584.00
Total								78,447,763		11,663,918	165,347		256,606.20	3,637.63	260,243.83

VILLAGE OF GILBERT.

La Belle	La Belle Iron Works.	NE. ¼ of NE. ¼	18	24	58	17	40	15,900	14	$2,225	$4,304	25.3	$56.29	$108.89	$165.18
		NW. ¼ of SE. ¼, except railway right of way.	18	24	58	17	39.28								
Mariska	Republic Iron & Steel Co.	NW. ¼ of SE. ¼	18	24	58	17	40	193,413	15	29,012	3,218	25.3	734.00	81.45	815.45
		SW. ¼ of SE. ¼, except railway right of way.	18	24	58	17	30.59								
Pettit	do	NW. ¼ of NW. ¼, except railway right of way.	18	25	58	17	37.15	718,673	14	100,615	14,780	25.3	2,545.56	373.93	2,919.49
Schley Prospect	do	SW. ¼ of NW. ¼, except railway right of way.	18	25	58	17	39.20	6,500,000	8	520,000	....	25.3	13,156.00	....	13,156.00
Hobart	Pittsburgh Iron Ore Co.	SE. ¼ of NW. ¼, except railway right of way.	18	25	58	17	35.29	1,827,484	14	255,748	2,508	25.3	6,470.43	63.45	6,533.88
Total								9,255,470	....	907,600	24,810	.....	22,962.28	627.72	23,590.00

VILLAGE OF HIBBING.

Hibbing Townsite Prospect.	Oliver Iron Mining Co.	Lot 5 and SE. ¼ of NW. ¼.	27	6	57	20	80	29,074,200	10	$2,907,420	....	14.1	$40,994.62	....	$40,994.62
Sellers	do	Lots 3 and 4	27	6	57	20	80.17	15,609,405	23	3,590,163	$62,613	14.1	50,621.30	$882.30	51,504.14
Webb	Shenango Furnace Co.	Lot 1	27	6	57	20	39.75	617,787	19	117,380	[1] 12,307	14.1	1,655.06	[1] 114.46	1,655.06
Do	do	Lot 2	27	6	57	20	39.82	300,000	10	30,000		14.1	423.00		537.46
Do	do	SW. ¼ of NE. ¼	27	6	57	20	36.53	6,450,000	10	645,000		14.1	9,094.50		9,094.50
Pillsbury Addition Prospect.	Oliver Iron Mining Co.	Lot 6	27	6	57	20	45.12	1,245,463	.08	99,637	....	14.1	1,404.88	....	1,404.88
Longyear No. 2 Prospect.	do	SE. ¼ of SW. ¼	27	6	57	20	40	3,340,843	.08	267,267	....	14.1	3,768.46	....	3,768.46
Do	do	SW. ¼ of SE. ¼	27	6	57	20	40								
Susquehanna	Buffalo & Susquehanna Iron Co	NE. ¼ of SW. ¼	27	6	57	20	40	13,063,853	14	1,828,939	20,573	14.1	25,788.04	290.08	26,078.12
Do	do	NW. ¼ of SE. ¼	27	6	57	20	40	6,512,141	10	651,214	....	14.1	9,182.12	....	9,182.12
Chisholm Prospect	Oliver Iron Mining Co.	E. ½ of SE. ¼	27	6	57	20	80	3,786,021	10	378,602	....	14.1	5,338.29	....	5,338.29
Longyear	do	SE. ¼ of NE. ¼	27	6	57	20	40	....	....	30,000	....	14.1	423.00	....	423.00
Morris	do	SE. ¼ of NE. ¼	27	31	58	20	40	25,945,532	30	7,783,660	[1] 41,564	14.1	109,749.61	[1] 386.55	110,136.16
		NE. ¼ of SE. ¼, except railway right of way.	27	31	58	20	36.28								
		SE. ¼ of SE. ¼, except railway right of way.	27	31	58	20	36.28								

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[1] Personal property assessed in town of Stuntz, rate, 9.3.

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

VILLAGE OF HIBBING—Continued.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
									Cents.			*Mills.*			
Crosby Prospect		SE. ¼ of NW. ¼	27	31	58	20	40	10,778	19	$2,048		14.1	$28.88		$28.88
Do		NE. ¼ of NW. ¼	27	31	58	20	40			50,000		14.1	705.00		705.00
Laura	Inland Steel Co.	SW. ¼ of SE. ¼	27	31	58	20	40	1,311,452	19	249,178	[1] $10,745	14.1	3,513.41	[1] $99.93	3,613.34
Day	Oliver Iron Mining Co.	NE. ¼ of SW. ¼	27	31	58	20	38.99	2,207,178	10	220,718		14.1	3,112.12		3,112.12
Do	do	SE. ¼ of SW. ¼	27	31	58	20	40	4,513,619	10	451,362		14.1	6,364.20		6,364.20
Winnifred	do	SW. ¼ of NE. ¼	27	31	58	20	40	76,762	19	14,585	4,749	14.1	205.65	66.96	272.61
(Burt-Pool) Burt	do	Lot 3	27	31	58	20	44.62	6,115,946	30	1,834,784	48,734	14.1	25,870.45	453.23	26,323.68
		Lot 4, except railway right of way.	27	31	58	20	40.82								
Do	do	SE. ¼	27	36	58	21	160	1,564,704	30	469,411		14.1	6,618.70		6,618.70
Mahoning	Mahoning Ore & Steel Co.	Lots 1 and 2	27	1	57	21	80.04	45,000,000	15	6,750,000		14.1	95,175.00		95,175.00
		Lots 3 and 4	27	1	57	21	80.12								
(Hull-Rust) Rust	Oliver Iron Mining Co.	SW. ¼ of NW. ¼	27	1	57	21	40	19,861,017	15	2,979,152		14.1	42,006.04		42,006.04
Do	do	SW. ¼ of NE. ¼	27	1	57	21	40	11,332,500	15	1,699,875	[1] 91,696	14.1	23,968.24	[1] 852.77	24,821.01
Do	do	SE. ¼ of NE. ¼	27	1	57	21	40	14,272,600	15	2,140,890	17,569	14.1	30,186.55	247.72	30,434.27
Do	do	SE. ¼ of NW. ¼	27	1	57	21	40	7,950,980	15	1,192,647		14.1	16,816.32		16,816.32
Do	do	SW. ¼ of SE. ¼	27	1	57	21	40	5,151,962	10	515,196		14.1	7,264.26		7,264.26
(Hull-Rust) Hull	do	NW. ¼ of SW. ¼ (balance in Stuntz).	27	1	57	21	40	11,679,000	15	1,751,850		14.1	24,701.09		24,701.09
Penobscot	do	NE. ¼ of SW. ¼ except railway right of way.	27	1	57	21	37.22	4,404,600	10	440,460		14.1	6,210.49		6,210.49
Penobscot Prospect	do	S. ½ of SW. ¼	27	1	57	21	80	7,644,629	10	764,462		14.1	10,778.91		10,778.91
		N. ½ of SE. ¼	27	1	57	21	80								
Burrows Prospect		SE. ¼ of SE. ¼	27	1	57	21	40			20,000		14.1	282.00		282.00
Burt Lands		NE. ¼ of NE. ¼	27	31	58	20	40			15,000		14.1	211.50		211.50
Total								249,042,972		39,890,900	310,550		562,461.69	3,394.54	565,856.23

VILLAGE OF McKINLEY.

McKinley	Oliver Iron Mining Co.	SE. ¼ of SW. ¼ SW. ¼ of SE. ¼ (balance in town of Biwabik).	18 18	8 8	58 58	16 16	40 40			$2,000	$13,389	28.6	$57.20	$382.93	$440.13
Wills	Republic Iron & Steel Co.	NE. ¼ of NE. ¼ SE. ¼ of NE. ¼, except railway right of way.	18 18	18 18	58 58	16 16	40 12	178,088	0.14	24,932	1,068	28.6	713.06	30.54	743.60
Do	do	Mineral int. underlying W. ½ of NW. ¼.	18	17	58	16				3,500		28.6	100.10		100.10
Total								178,088		30,432	14,457		870.36	413.47	1,283.83

VILLAGE OF MESABA.

McGuire No. 2 Prospect.	Oliver Iron Mining Co.	NW. ¼ of SE. ¼ (balance in town of Mesaba).	13	21	59	14	40	472,882	0.08	$37,830		20.2	$764.17		$764.17

VILLAGE OF SPARTA.

Sparta Townsite Prospect.	Oliver Iron Mining Co.	Mineral int. underlying plat of Sparta, lots 1 and 2.	18	34	58	17	64	1,676,672	8	$134,134		34.4	$4,614.21		$4,614.21

TOWN OF CLINTON.

Oliver Prospect	Oliver Iron Mining Co.	Lot 1 and SE. ¼ of NE. (balance in town of Fayal).	25	1	58	18	80.06			$5,000		42.0	$210.00		$210.00

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[1] Assessed in town of Stuntz, rate 9.3 mills.

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

TOWN OF BIWABIK.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
									Cents.			*Mills.*			
Hector	Hector Iron Co.	SW. ¼ of NE. ¼	24	1	58	16	36.79	178,000	14	$24,920	$17,210	29.7	$740.12	$511.14	$1,251.26
Ajax	Ajax Mining Co.	Lot 3	24	1	58	16	40.07								
		Lot 4	24	1	58	16	40.10								
		SW. ¼ of NW. ¼, except railway right of way.	24	1	58	16	37.99				[1]1,200			[1]23.28	
										25,300	7,080	29.7	751.40	210.28	984.96
		SE. ¼ of NW. ¼	24	1	58	16	40								
Bangor	Pickands, Mather Co.	Lot 5 (balance in town of White).	24	1	58	16	25.75	811,620	15	121,743	110	29.7	3,615.77	3.27	3,619.04
Williams	Thomas Furnace Co.	Lot 2	24	2	58	16	40.31	99,300	23	22,839	1,711	29.7	678.32	50.82	729.14
		Lot 3, except railway right of way.	24	2	58	16	38.10								
Cass	Cass Mining Co.	SE. ¼ of NW. ¼	24	2	58	16	40	38,879	23	8,942	1,580	29.7	265.58	46.92	312.50
		SW. ¼ of NE. ¼	24	2	58	16	40								
Biwabik	Biwabik Mining Co.	Lot 4 (balance in village of Biwabik).	24	2	58	16	40.57	1,297,000	30	389,100		29.7	11,556.27		11,556.27
Cincinnati	do	SW. ¼ of NW. ¼	24	2	58	16	40	93,631	30	28,089		29.7	834.24		834.24
Higgins Prospect	Oliver Iron Mining Co.	SE. ¼ of SW. ¼, except railway right of way.	24	3	58	16	70.45	1,300,000	10	130,000		29.7	3,861.00		3,861.00
		NE. ¼ of SW. ¼	24	3	58	16									
Canton	do	Lot 3, except railway right of way.	24	3	58	16	37.11	600,000	10	60,000		29.7	1,782.00		1,782.00
		Lot 4, except railway right of way.	24	3	58	16	40.40								
		S. ½ of NW. ¼, except railway right of way (balance in village of Biwabik).	24	3	58	16	77.73								
Holland	Swallow & Hopkins (mined out).														

McKinley	Oliver Iron Mining Co.	SW. ¼ of NE. ¼, except railway right of way.	18	8	58	16	112.20	1,978,865	23	455,138	....	29.8	13,563.11	....	13,563.11
		NW. ¼ of SE. ¼, except railway right of way.	18	8	58	16									
		SE. ¼ of NW. ¼, except railway right of way.	18	8	58	16									
		NW. ¼ of NE. ¼	18	8	58	16	40								
		NE. ¼ of NW. ¼	18	8	58	16	40								
		NE. ¼ of SW. ¼ (balance in village of McKinley).	18	8	58	16	40								
Kellogg	New York State Steel Co.	NW. ¼ of NE. ¼	18	9	58	16	40	2,438,513	14	341,392	7,590	29.8	10,173.48	226.18	10,399.66
Monica	Republic Iron & Steel Co.	NE. ¼ of NW. ¼	18	9	58	16	40	200,000	15	30,000	4,060	29.8	894.00	120.99	1,014.99
Corsica	Pickands, Mather & Co.	Lot 4, except railway right of way.	18	18	58	16	43.66	1,203,515	14	168,492	12,315	29.8	5,021.06	....	5,021.06
		NE. ¼ of SW. ¼, except railway right of way.	18	18	58	16	37.22	40,000	10	4,000		29.8	119.20	366.99	486.19
		NW. ¼ of SE. ¼, except railway right of way.	18	18	58	16	37.09	1,980,514	10	198,051		29.8	5,901.92	....	5,901.92
Total	....	....	....	....	....	....	....	12,259,837	....	2,008,006	52,856	....	59,757.47	1,559.87	61,317.34

TOWN OF BREITUNG.

Soudan	Oliver Iron Mining Co.	NW. ¼ of SE. ¼	9	27	62	15	40	594,768	23	$136,797	$13,266	31.3	$4,281.75	$415.23	$4,696.98
		N. ½ of SW. ¼	9	27	62	15	80								
		SE. ¼ of NE. ¼	9	27	62	15	40								
		NE. ¼ of SE. ¼, except railway right of way.	9	28	62	15	33.88								

[a] Assessed and taxed in town of Mesaba, rate 19.4.

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

TOWN OF FAYAL.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
Fayal	Oliver Iron Mining Co.	SW. ¼ of SW. ¼	39	5	57	17	40	13,436,194	*Cents.* 27	$3,627,772	$103,916	*Mills.* 14.7	$53,328.25	$1,527.57	$54,855.82
		Lot 2	39	5	57	17	40.54								
		NW. ¼ of SW. ¼	39	5	57	17	40								
		SW. ¼ of NW. ¼	39	5	57	17	40								
		SE. ¼ of NW. ¼	39	5	57	17	40								
		Lots 3 and 4, except railway right of way.	39	5	57	17	80.15								
		NE. ¼ of SW. ¼	39	5	57	17	40								
		NW. ¼ of SE. ¼	39	5	57	17	40								
		SW. ¼ of NE. ¼	39	5	57	17	40								
		SE. ¼ of SW. ¼	39	5	57	17	40								
		SE. ¼ of NE. ¼ and lot 1, except railway right of way.	39	6	57	17	75.95								
		SW. ¼ of NE. ¼	39	6	57	17	40								
		E. ½ of NW. ¼	39	6	57	17	80.24								
		NE. ¼ of SE. ¼	39	6	57	17	151.91								
		NW. ¼ of SE. ¼	39	6	57	17									
		S. ½ of SE. ¼	39	6	57	17									
		NW. ¼ of NW. ¼, except railway right of way.	39	8	57	17	37.70								
Oliver Prospect	do	Lots 4 and 5, except railway right of of way (balance in town of Clinton).	39	6	57	17	77.29	186,261	10	18,626		14.7	273.80		273.80
Troy	Pickands, Mather & Co.	NE. ¼ of NE. ¼	39	7	57	17	40	317,686	19	60,360	10,228	14.7	887.29	150.35	1,037.64
Total								13,940,141		3,706,758	114,144		54,489.34	1,677.92	56,167.26

TOWN OF GREAT SCOTT.

Seneca Prospect		N. ½ of SW. ¼	35	10	58	19	80			$10,000		13.7	$137.00		$137.00
Midway Prospect	Oliver Iron Mining Co.	S. ½ of SW. ¼ and SW. ¼ of SE. ¼.	35	10	58	19	120	1,503,114	8	120,249		13.7	1,647.41		1,647.41
Miller Prospect	Mariska Iron Co.	NW. ¼ of SE. ¼	35	10	58	19	40			9,600		13.7	131.52		131.52
Woodbridge Prospect	Oliver Iron Mining Co.	N. ½ of NE. ¼	35	11	58	19	80	811,248	8	64,900		13.7	889.13		889.13
		W. ½ of NW. ¼	35	11	58	19	80								
Central Prospect	do	S. ½ of NE. ¼	35	11	58	19	80	234,663	8	18,773		13.7	257.19		257.19
		S. ½ of NW. ¼	35	11	58	19	80								
Yates	Consumers Ore Co.	S. ½	35	11	58	19	320			200,000	$11,320	13.7	2,740.00	$155.08	2,895.08
Oliver Prospect	Oliver Iron Mining Co.	N. ½ of SW. ¼	35	12	58	19	80	419,541	8	33,563		13.7	459.81		459.81
		NW. ¼ of SE. ¼	35	12	58	19	40								
Helmer	Jennings Mines Co.	NE. ¼ of NE. ¼	35	14	58	19	40	1,000,000	10	100,000		13.7	1,370.00		1,370.00
Jennings	do	NW. ¼ of NE. ¼, except railway right of way.	35	14	58	19	36.86	27,000	19	5,130		13.7	70.28		70.28
Do	do	SW. ¼ of NE. ¼, except railway right of way.	35	14	58	19	39.99			2,000		13.7	27.40		27.40
Oliver Prospect	Oliver Iron Mining Co.	SE. ¼ of NE. ¼, except railway right of way.	35	14	58	19	39.50	590,197	8	47,216		13.7	646.86		646.86
Kinney	Republic Iron & Steel Co.	NE. ¼ of NW. ¼	35	14	58	19	40	2,358,059	14	330,128		13.7	4,522.75		4,522.75
		SE. ¼ of NW. ¼, except railway right of way.	35	14	58	19	39.95	500,000	10	50,000	16,230	13.7	685.00	222.35	907.35
		NW. ¼ of NW. ¼	35	14	58	19	40	2,495,952	14	349,433		13.7	4,787.24		4,787.24
Whiteside Prospect	Oliver Iron Mining Co.	S. ½ of NE. ¼	35	15	58	19	80	8,809,071	10	880,907		13.7	12,068.43		12,068.43
		SE. ¼ of NW. ¼	35	15	58	19	40								
Neville Prospect	do	NE. ¼ of NW. ¼	35	15	58	19	40	1,501,865	8	120,149		13.7	1,646.04		1,646.04
La Belle Prospect	do	NW. ¼ of NW. ¼	35	15	58	19	40	4,098,912	8	327,913		13.7	4,492.41		4,492.41
Shenango Prospect No. 2.	Shenango Furnace Co.	SW. ¼ of NW. ¼	35	15	58	19	40	4,200,000	8	336,000		13.7	4,603.20		4,603.20
Chisholm Prospect No. 2.	Oliver Iron Mining Co.	NE. ¼ of SW. ¼	35	15	58	19	40	1,875,319	8	150,025		13.7	2,055.34		2,055.34
Do	do	SE. ¼ of SW. ¼, except railway right of way.	35	15	58	19	36.79			500		13.7	6.85		6.85
Do	do	NW. ¼ of SE. ¼	35	15	58	19	40			500		13.7	6.85		6.85
Do	do	NE¼ of SE¼.	35	15	58	19	40			500		13.7	6.85		6.85
Do	do	SE. ¼ of SE. ¼	35	15	58	19	40			500		13.7	6.85		6.85
Kosmerl Prospect	do	NW. ¼ of SW. ¼	35	15	58	19	40	9,312,947	10	931,294		13.7	12,758.73		12,758.73
		SW. ¼ of SW. ¼, except railway right of way.	35	15	58	19	36.79								
Do	do	N. ½ of NW. ¼	35	22	58	19	80			1,000		13.7	13.70		13.70
C. H. Bradley, State lease.		N. ½	35	16	58	19	320			12,000		13.7	164.40		164.40

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

TOWN OF GREAT SCOTT—Continued.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation	Tax rate.	Real estate tax.	Personal tax.	Total tax.
									Cents.			*Mills.*			
Wanless No. 1	Oliver Iron Mining Co	N. ½ of SW. ¼	35	16	58	19	80			$50,000		13.7	$685.00		$685.00
Wanless No. 2	do	S. ½ of SW. ¼	35	16	58	19	80	1,254,418	8	100,353		13.7	1,374.84		1,374.84
Do	do	NE. ¼ of SE. ¼	35	16	58	19	40	2,984,442	8	238,755		13.7	3,270.94		3,270.94
Wanless No. 3	do	W. ½ of SE. ¼	35	16	58	19	80			75,000		13.7	1,027.50		1,027.50
Do	do	SE. ¼ of SE. ¼	35	16	58	19	40								
Iron Chief Prospect	do	Lot 4 Lots 1 and 2 (balance in village of Buhl.)	35 35	18 19	58 58	19 19	154.37	300,000	10	30,000		13.7	411.00		411.00
Grant	Interstate Iron Co.	NW. ¼ of SW. ¼ (balance in village of Buhl.)	35	20	58	19	40			1,000		13.7	13.70		13.70
Frantz	Consumer's Ore Co.	NW. ¼ of NW. ¼	35	21	58	19	40	2,000,000	19	380,000	$2,000	13.7	5,206.00	$27.40	5,233.40
Total								46,276,748		4,977,388	29,550		68,190.22	404.83	68,595.05

TOWN OF MESABA.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation	Tax rate.	Real estate tax.	Personal tax.	Total tax.
Spring	Spring Mining Co.	S. ½ of NE. ¼	13	11	59	14	80	230,743	15	$34,611	$2,480	19.4	$671.45	$48.11	$719.56
Mayas	Mayas Iron Co.	NW. ¼ of SW. ¼	13	15	59	14	40			10,100		19.4	195.94		195.94
Knox	New York State Steel Co.	SE. ¼ of SW. ¼	13	19	59	14	40	876,728	10	87,673	2,243	19.4	1,700.86	43.51	1,744.37
Oliver Prospect	Oliver Iron Mining Co.	SW. ¼ of SE. ¼	13	19	59	14	40	352,986	8	28,239		19.4	547.83		547.83
Wallace-Moon Prospect.	do	SW. ¼ of SE. ¼, except railway right of way.	13	20	59	14	39.40	564,608	10	56,461		19.4	1,095.34		1,095.34
Northwest Prospect	do	NE. ¼ of SW. ¼	13	21	59	14	40	997,878	8	79,831		19.4	1,548.72		1,548.72
Hartley Prospect	do	SW. ¼ of SW. ¼, except railway right of way.	13	21	59	14	39.90	399,635	8	31,971		19.4	620.24		620.24
McGuire Prospect No. 1	do	SE. ¼ of SW. ¼	13	21	59	14	40	775,115	8	62,009		19.4	1,202.97		1,202.97
McGuire Prospect No. 2	do	SW. ¼ of SE. ¼ (balance in village of Mesaba).	13	21	59	14	40			1,000		19.4	19.40		19.40

M. H. Alworth land		N. ½ of NE. ¼	13	29	59	14	80			9,500		19.4	184.30		184.30
Adriatic	Adriatic Mining Co.	NW. ¼ of NE. ¼	13	30	59	14	40	749,810	14	104,973	7,376	19.4	2,036.48	143.09	2,179.57
Do	do	SW. ¼ of NE. ¼	13	30	59	14	40	150,000	14	21,000		19.4	407.40		407.40
Iron Range Prospect	Oliver Iron Mining Co.	NE. ¼ of NW. ¼	13	30	59	14	40	550,211	8	44,017		19.4	853.93		853.93
Total								5,647,714		571,385	12,099		11,084.86	234.71	11,319.57

TOWN OF MISSABE MOUNTAIN.

Larkin	New York State Steel Co.	Lot 1, except railway right of way.	22	4	58	17	38.90	367,323	14	$51,425	$3,960	12.6	$647.96	$49.90	$697.86
Schupp Prospect	Oliver Iron Mining Co.	Lot 2	22	4	58	17	39.86	504,297	10	50,429		12.6	635.41		635.41
Northern Prospect	do	SW. ¼ of NE. ¼, except railway right of way.	22	4	58	17	35.36	1,154,195	10	115,419		12.6	1,454.28		1,454.28
Minorca	Pickands, Mather & Co.	Lot 4	22	4	58	17	39.68	32,103	23	7,384	9,220	12.6	93.04		93.04
		Lot 1	22	5	58	17	39.74	21,022	23	4,834		12.6	60.91	116.17	177.08
		Lot 2	22	5	58	17	39.94	134,566	23	30,951		12.6	389.98		389.98
Higgins	Oliver Iron Mining Co.	S. ½ of NW. ¼	22	4	58	17	80	3,403,685	23	782,847	43,466	12.6	9,863.87	547.67	10,411.54
McEwen	do	E. 15 acres of NW. ¼ of SW. ¼.	22	4	58	17	15	143,993	10	14,399		12.6	181.43		181.43
Do	do	NE. ¼ of SW. ¼	22	4	58	17	40	953,146	23	219,224		12.6	2,762.22		2,762.22
Onandaga	Republic Iron & Steel Co.	W. 25 acres of NW. ¼ of SW. ¼.	22	4	58	17	25	392,082	15	58,812	3,230	12.6	741.03	40.70	781.73
Lincoln	Interstate Iron Co.	S. ½ of SW. ¼	22	4	58	17	80	1,422,131	23	327,090	32,718	12.6	4,121.33	412.26	4,533.59
		NW. ¼ of SE. ¼	22	4	58	17	40								
		SE. ¼ of SE. ¼	22	5	58	17	40								
Sauntry	Oliver Iron Mining Co.	SW. ¼ of NE. ¼	22	5	58	17	160	6,177,179	15	926,577		12.6	11,674.87		11,674.87
		N. ½ of SE. ¼	22	5	58	17									
		SW. ¼ of SE. ¼ (balance in Virginia).	22	5	58	17									
Missabe Mountain	do	NE. ¼	22	8	58	17	160	10,043,179	27	2,711,658		12.6	34,166.89		34,166.89
Moose Prospect	do	E. ½ of SE. ¼	22	8	58	17	80	9,000,000	15	1,350,000		12.6	17,010.00		17,010.00
Shaw Prospect	do	W. ½ of SE. ¼, except 13.67 acres.	22	8	58	17	66.33	3,000,000	15	450,000		12.6	5,670.00		5,670.00
Humphreys No. 2		NE. ¼ of NE. ¼	22	9	58	17	40			10,000		12.6	126.00		126.00
Auburn Iron Co		NW. ¼ of NE. ¼	22	9	58	17	40			10,000		12.6	126.00		126.00
Bessemer	Republic Iron & Steel Co.	SW. ¼ of NE. ¼	22	9	58	17	40	91,219	23	20,980	19,985	12.6	264.35	251.81	516.16
		NW. ¼ of SE. ¼	22	9	58	17	40	807,748	15	121,162		12.6	1,526.64		1,526.64
Union	do	NE. ¼ of NW. ¼	22	9	58	17	40	2,010,381	14	281,451	4,391	12.6	3,546.28	55.33	3,601.61
Commodore	Corrigan, McKinney & Co.	NW. ¼ of NW. ¼	22	9	58	17	40	1,622,797	23	373,243	30,480	12.6	4,702.86	384.05	5,086.91
Lone Jack	Oliver Iron Mining Co.	SW. ¼ of NW. ¼	22	9	58	17	40	2,319,193	27	626,182	[1] 65,200	12.6	7,889.89	821.52	8,711.41

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[1] Includes personal for Ohio, Norman, and Oliver mines.

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

TOWN OF MISSABE MOUNTAIN—Continued.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
									Cents.			*Mills.*			
Franklin	Republic Iron & Steel Co.	SE. ¼ of NW. ¼, except railway right of way.	22	9	58	17	36.70	10,812	23	$2,487	$2,680	12.6	$31.34	$33.77	$65.11
Norman	Oliver Iron Mining Co.	NE. ¼ of SW. ¼	22	9	58	17	40	5,359,944	15	803,992		12.6	10,130.30		10,130.30
Ohio	do	W. ½ of SW. ¼	22	9	58	17	80	4,143,070	27	1,118,629		12.6	14,094.73		14,094.73
Yawkey	Pickands, Mather Co.	SE. ¼ of SW. ¼	22	9	58	17	40	94,100	14	13,174	4,641	12.6	165.99	58.47	224.46
Victoria	Republic Iron & Steel Co.	S. ½ of SE. ¼	22	9	58	17	80	216,140	19	41,067	6,766	12.6	517.44	85.25	602.69
Elba	Pickands, Mather Co.	NE. ¼ of SE. ¼, except railway right of way.	18	13	58	17	36.43	1,489,648	19	283,033	17,435	16.4	4,641.74	285.93	4,927.67
		SW. ¼ of SE. ¼, except railway right of way.	18	13	58	17	34.16								
		SE. ¼ of SE. ¼ except railway right of way.	18	13	58	17	39.10								
Gilbert	Oliver Iron Mining Co.	E. ½ of NE. ¼, except railway right of way.	18	26	58	17	77.10	9,415,514	15	1,412,514	60,812	16.4	23,165.23	997.32	24,162.55
Do	do	NW. ¼ of NE. ¼, except 3 acres.	18	26	58	17	37	1,579,681	27	426,514		16.4	6,994.84		6,994.84
		SW. ¼ of NE. ¼	18	26	58	17	40								
Chicago Prospect	do	E. ½ of NW. ¼	18	26	58	17	80	92,537	10	9,253		16.4	151.75		151.75
Elba Prospect No. 1	do	E. ½ of SW. ¼, except railway right of way.	18	26	58	17	76.10	1,000,000	10	100,000		16.4	1,640.00		1,640.00
Elba Prospect No. 2	do	NW. ¼ of SW. ¼	18	26	58	17	40	1,500,000	10	150,000		16.4	2,460.00		2,460.00
Do	do	SW. ¼ of SW. ¼, except railway right of way.	18	26	58	17	39.70								
Chicago Prospect	do	SE. ¼	18	26	58	17	149.09	1,386,388	10	138,639		16.4	2,273.68		2,273.68
Nelson Prospect	do	Lot 4, except railway right of way.	39	30	58	17	35.97			14,000		14.8	207.20		207.20
Do	do	E. ½ of SW. ¼, except railway right of way.	39	30	58	17	77								

Adams Northern Dev	do	Lot 1, except railway right of way.	39	31	58	17	35.22	7,305,625	15	1,095,844		14.8	16,218.49		16,218.49
Adams, Adams	do	E. ½ of NW. ¼	39	31	58	17	80	13,215,259	23	3,039,510	174,269	14.8	44,984.75	2,579.18	47,563.93
Do	do	W. ½ of NE. ¼, except railway right of way.	39	31	58	17	75.77								
Adams, "Hull 40"	do	Lot 2	39	31	58	17	38.90	1,858,699	23	427,501		14.8	6,327.02		6,327.02
Adams, "Dorr 80"	do	E. ½ of NE. ¼, except 3.96 acres.	39	31	58	17	76.04	52,337	23	12,038		14.8	178.16		178.16
Adams, Cloquet	do	SW. ¼, except railway right of way.	39	31	58	17	148.41	10,821,548	23	2,488,956	32,976	14.8	36,836.55	488.04	37,324.59
Adams, "Park lot"	do	A piece of land in SE. ¼ of SE. ¼, containing 5.12 acres.	39	31	58	17	5.12	34,168	8	2,733		14.8	40.45		40.45
Northern Dev. Co.		SE. ¼ of SW. ¼	39	32	58	17	40			5,000		14.8	74.00		74.00
Sparta	Oliver Iron Mining Co.	NE. ¼, ex. 4 acres	18	34	58	17	156			1,320		16.4	21.65		21.65
Genoa	do	NE. ¼ of SW. ¼, except railway right of way. NW. ¼ of SW. ¼ SW. ¼ of SW. ¼ SE. ¼ of SW. ¼ except railway right of way.	18	34	58	17	154.06	1,791,561	19	340,397	4,000	16.4	5,582.51	65.60	5,648.11
		SW. ¼ of NW. ¼	18	34	58	17	40								
Sec. Land & Ex. Co.		N. ½ of SE. ¼, except railway right of way.	18	34	58	17	75.53			8,650		16.4	141.86		141.86
Malta	Pickands, Mather & Co.	W. ½ of NW. ¼, except railway right of way.	18	35	58	17	68.65	17,182	14	2,406	6,369	16.4	39.46	104.45	143.91
Total								104,984,452		20,481,724	522,598		284,574.38	7,377.42	291,951.80

TOWN OF MORSE.

Savoy	Oliver Iron Mining Co.	E. ½ of NW. ¼, except railway right of way.	12	26	63	12	79.91	185,084	23	$42,569	$17,931	36.9	$1,570.80	$661.66	$2,232.46
Sibley	do	W. ½ of SW. ¼, except railway right of way (balance in city of Ely).	12	26	63	12	79.91	1,031,703	23	237,292	20,791	36.9	8,756.07	767.19	9,523.26
Total								1,216,797		279,861	38,722		10,326.87	1,428.85	11,755.72

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

TOWN OF NICHOLS.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
									Cents.			*Mills.*			
Hanna	Consumer's Ore Co.	W. ½ of SW. ¼	21	2	58	18	80	600,000	15	$90,000	$7,000	9.0	$310.00	$63.00	$373.00
		N. ½ of SE. ¼	21	3	58	18	80								
Hill Prospect	Oliver Iron Mining Co.	E. ½ of SW. ¼	21	2	58	18	80	297,335	8	23,780		9.0	214.07		214.07
Republic Prospect		NW. ¼ of SE. ¼	21	2	58	18	40			20,000		9.0	180.00		180.00
Shively Prospect	Oliver Iron Mining Co.	Lot 2	21	3	58	18	41.21	1,320,072	10	132,007		9.0	1,188.06		1,188.06
		SW. ¼ of NE. ¼	21	3	58	18	40								
Mountain Iron (Rathbun).	do	Lot 3	21	3	58	18	41.35								
Do	do	Lot 4	21	3	58	18	160.49				215,000				
Do	do	SW. ¼ of NW. ¼	21	3	58	18		20,358,664	30	6,107,599		9.0	54,968.39		54,968.39
Do	do	SE. ¼ of NE. ¼	21	4	58	18						9.0		1,935.00	1,935.00
Do	do	NW. ¼ of SW. ¼	21	3	58	18									
Mountain Iron (Aetna).	do	NE. ¼ of SE. ¼	21	4	58	18	40	1,925,643	30	577,693		9.0	5,199.24		5,199.24
Wacoutah	Pitt Mining Co.	SE. of SW	21	3	58	18	40	150,000	19	28,500	14,500	9.0	256.50		256.50
Do	do	SW. ¼ of SE. ¼	21	3	58	18	40					9.0		130.50	130.50
Do	do	SE. ¼ of SE. ¼	21	3	58	18	40	4,442,119	19	844,003		9.0	7,596.03		7,596.03
Do	do	NW. ¼ of NW. ¼	21	11	58	18	40	250,000	10	25,000		9.0	225.00		225.00
Brunt	Pittsburgh Iron Ore Co.	NE. ¼ of NE. ¼	21	10	58	18	40	2,180,737	19	414,340	2,341	9.0	3,729.06	21.07	3,750.13
Do	do	NW. ¼ of NE. ¼	21	10	58	18	40	651,807	19	123,843		9.0	1,114.59		1,114.59
Do	do	SW. ¼ of NE. ¼, except railway right of way.	21	10	58	18	76	1,557,883	19	295,988		9.0	2,663.89		2,663.89
Do	do	NW. ¼ of SE. ¼, except railway right of way.	21	10	58	18									
Iroquois	Rogers Iron Mining Co.	NE. of NW	21	10	58	18	40	670,817	14	93,915	11,617	9.0	845.24	104.55	949.79
Do	do	SE. of NW., except railway right of way.	21	10	58	18	37.12	605,097	14	84,713		9.0	762.42		762.42
Gross Prospect	Oliver Iron Mining Co.	E. ½ of SE	21	25	58	18	80	500,000	10	50,000		9.0	450.00		450.00
Leonidas	do	E. ½	21	36	58	18	320	4,324,382	15	648,657		9.0	5,837.91		5,837.91
Oliver Prospect	do	NE. ¼	21	36	59	18	160	158,222	8	12,658		9.0	113.92		113.92
Do	do	W. ½	21	36	59	18	320			17,600		9.0	158.40		158.40
Do	do	SE. ¼	21	36	59	18	160	2,562,262	8	204,981		9.0	1,844.83		1,844.83
Total								42,555,040		9,795,283	250,458		88,157.55	2,254.12	90,411.67

D. & I. R lands		S. ½ of NE. ¼	27	5	57	20	80			16,000		9.3	148.80		148.80
Nassau	Nassau Ore Co	Lot 2	27	5	57	20	39.39	1,098,740	14	153,824	3,379	9.3	1,430.56	31.42	1,461.98
		Lot 3	27	5	57	20	39.52	2,778,569	14	389,000		9.3	3,617.70		3,617.70
Longyear	Interstate Iron Co.	Lot 4	27	5	57	20	39.65	7,500,000	19	1,425,000		9.3	13,252.50		13,252.50
Iron Range Prospect	Oliver Iron Mining Co.	SW. ¼ of NW. ¼, except railway right of way.	27	5	57	20	36.78	353,070	18	28,246		9.3	262.69		262.69
Do	do	SE. ¼ of NW. ¼, except railway right of way.	27	5	57	20	36.90	1,260,100	8	100,808		9.3	937.52		937.52
Iron lands		SE. ¼	27	5	57	20	160			24,000		9.3	223.20		223.20
Do		NE. ¼ of SW. ¼	27	5	57	20	40			6,000		9.3	55.80		55.80
Bennett Prospect	Oliver Iron Mining Co.	NW. ¼ of NE. ¼	27	7	57	20	40	4,367,474	8	349,398		9.3	3,249.40		3,249.40
Brooklyn Townsite		Mineral int. underlying village of Brooklyn (SW. ¼ of NE. ¼).	27	7	57	20				5,000		9.3	46.50		46.50
Iron Range Prospect	Oliver Iron Mining Co.	E. ½ of NE. ¼	27	7	57	20	80	4,179,506	8	334,360		9.3	3,109.55		3,109.55
Agnew Prospect No. 3	do	Lot 1	27	7	57	20	45.05	9,259,700	10	925,970		9.3	8,611.52		8,611.52
Do	do	Lot 2	27	7	57	20	44.75								
Do	do	E. ½ of NW. ¼	27	7	57	20	80								
Iron lands		N. ½ and SW. ¼	27	8	57	20	480			15,000		9.3	139.50		139.50
Croxton	Croxton Mining Co.	SW. ¼ of SW. ¼	40	13	58	20	40	172,707	14	24,179	2,166	10.3	249.04	22.31	271.35
Do	do	5 acres in SE. ¼ of SW. ¼.	40	13	58	20	5								
Syn Prospect		SE. ¼ of SW. ¼, except 5 acres.	40	13	58	20	35			10,000		10.3	103.00		103.00
Burt Prospect	Oliver Iron Mining Co.	NE. ¼ of SE. ¼	40	13	58	20	40			8,500		10.3	87.55		87.55
		S. ½ of SE. ¼	40	13	58	20	80								
Palmer Prospect	do	SE. ¼ of SE. ¼	40	14	58	20	40	859,629	8	68,770		10.3	708.33		708.33
Burt lands No. 3	do	NE. ¼ of NE. ¼	40	23	58	20	40	10,982,618	10	1,098,261		10.3	11,312.09		11,312.09
		NW. ¼ of NW. ¼	40	24	58	20	40								
Hartley	do	NW. ¼ of NE. ¼	40	23	58	20	40	6,513,453	23	1,498,094	72,793	10.3	15,430.37	749.76	16,180.13
		NE. ¼ of NW. ¼	40	23	58	20	40								
Clark Prospect	do	S. ½ of NE. ¼	40	23	58	20	80			20,000		10.3	206.00		206.00
Humphreys	do	W. ½ of NW. ¼	40	23	58	20	80	4,279,550	10	427,956		10.3	4,407.95		4,407.95
St. Clair	do	SE¼ of NW¼	40	23	58	20	40	2,055,120	14	287,717		10.3	2,963.49		2,963.49
d'Autremont Prospect	do	NE¼ of SW¼, except railway right of way.	40	23	58	20	76.82	4,442,680	15	666,402		10.3	6,863.94		6,863.94
		SE¼ of SW¼	40	23	58	20									
Shenango	Shenango Furnace Co.	NE¼ of NE¼	40	27	58	20	40	8,677,275	14	1,214,822		10.3	12,512.67		12,512.67
		NW¼ of SW¼ (balance in Chisholm).	40	23	58	20	40								

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

TOWN OF NICHOLS—Continued.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
									Cents			*Mills.*			
Iron Range Prospect	Oliver Iron Mining Co	SW. ¼ of SW ¼, except railway right of way.	40	23	58	20	36.82			$10,000	......	10.3	$103.00		$103.00
Burt Prospect	......do	NE. ¼ of SE. ¼, except railway right of way.	40	23	58	20	36.82	......	..	20,000	......	10.3	206.00	......	206.00
Burt Prospect, No. 5	......do	NW. ¼ of SE. ¼	40	23	58	20	40	5,545,223	8	443,618	......	10.3	4,569.26	......	4,569.26
Pontiac Prospect	......do	SW. ¼ of SE. ¼, except railway right of way.	40	23	58	20	36.82	......	......	10,000	......	10.3	103.00	......	103.00
Do	......do	SE. ¼ of SE. ¼	40	23	58	20	40	......	......	10,000	......	10.3	103.00	......	103.00
Burt Prospect	......do	NE. ¼ of NE. ¼	40	24	58	20	40	......	......	5,000	......	10.3	51.50	......	51.50
Forrester Prospect	......do	W. ½ of NE. ¼ E. ½ of NW. ¼	40 40	24 24	58 58	20 20	80 80	7,406,487	10	740,648	......	10.3	7,628.67	......	7,628.67
Burt Prospect	......do	NW. ¼ of SW. ¼	40	24	58	20	40	......	......	20,000	......	10.3	206.00	......	206.00
Do	......do	SW. ¼ of SW. ¼, except railway right of way.	40	24	58	20	36.82	1,406,031	8	112,482	......	10.3	1,158.57	......	1,158.57
Do	......do	NW. ¼ of SE. ¼	40	24	58	20	40	......	......	20,000	......	10.3	206.00	......	206.00
Oliver Prospect	......do	E. ½ of NW. ¼	40	25	58	20	80	543,950	8	43,516	......	10.3	448.21	......	448.21
McGilvary Prospect	......do	W. ½ of NW. ¼	40	25	58	20	80	859,976	8	68,798	......	10.3	708.62	......	708.62
Missabe Prospect	......do	SW. ¼ of SW. ¼ SE. ¼ of SE. ¼, except railway right of way.	40 40	26 27	58 58	20 20	40 37.70	6,750,945	8	540,076	......	10.3	5,562.78	......	5,562.78
Iron lands	......	NW. ¼ of SE. ¼	40	26	58	20	40	......	......	5,000	......	10.3	51.50	......	51.50
Niles	Oliver Iron Mining Co.	NW. ¼ of NE. ¼	40	27	58	20	40	3,161,697	8	252,936	......	10.3	2,605.24	......	2,605.24
Do	......do	SW. ¼ of NE. ¼	40	27	58	20	40	221,191	8	17,695	......	10.3	182.26	......	182.26
Do	......do	NW. ¼ of SE. ¼	40	27	58	20	40	902,567	8	72,205	......	10.3	743.71	......	743.71
Iron lands	......	SE. ¼ of NE. ¼	40	27	58	20	40	......	......	5,000	......	10.3	51.50	......	51.50
West Mesaba Prospect	Oliver Iron Mining Co.	NE. ¼ of NW. ¼	40	27	58	20	40	4,136,616	8	330,928	......	10.3	3,408.56	......	3,408.56
Do	......do	SE. ¼ of NW. ¼	40	27	58	20	40	7,897,300	8	631,784	......	10.3	6,507.38	......	6,507.38
G. G. Hartley Prospect.	......do	NW. ¼ of NW. ¼	40	27	58	20	40	7,047,727	10	704,772	......	10.3	7,259.15	......	7,259.15
Pillsbury Prospect No. 2.	......	**SW. ¼ of NW. ¼**	40	27	58	20	40	1,797,945	8	143,836	......	10.3	1,481.51	......	1,481.51
J. B. Adams Prospect	Oliver Iron Mining Co.	SW. ¼	40	27	58	20	160	17,611,443	8	1,408,915	......	10.3	14,511.82	......	14,511.82

Iron lands		NE. ¼ of SE. ¼	40	27	58	20	40			$5,000		10.3	$51.50		$51.50
Pettit Prospect	Oliver Iron Mining Co.	SW. ¼ of SE. ¼	40	27	58	20	40	1,459,682	8	116,774		10.3	1,202.77		1,202.77
Pillsbury	do	SW. ¼ of NE. ¼	27	29	58	20	40	1,034,881	10	103,488	$14,565	9.3	962.44		962.44
Do	do	SE. ¼ of NW. ¼	27	29	58	20	80	1,138,187	23	261,783		9.3	2,434.58	$135.45	2,570.03
Do	do	NE. ¼ of SW. ¼	27	29	58	20									
Do	do	NW. ¼ of SE. ¼	27	29	58	20	40	1,128,950	10	112,895		9.3	1,049.92		1,049.92
Morrow	Bradford Mining Co.	NW. ¼ of SW. ¼	27	29	58	20	40	14,102	14	1,974		9.3	18.36		18.36
Pillsbury Prospect		SW. ¼ of SW. ¼	27	29	58	20	40			15,000		9.3	139.50		139.50
St. Anthony Prospect No. 1.	Oliver Iron Mining Co.	SE. ¼ of SW. ¼	27	29	58	20	40	1,903,797	8	152,304		9.3	1,416.43		1,416.43
Do	do	SW. ¼ of SE. ¼	27	29	58	20	40								
Glenn	do	SE. ¼ of NE. ¼	27	29	58	20	40	2,519,450	23	579,473	32,327	9.3	5,389.10		5,389.10
Do	do	NE. ¼ of SE. ¼	27	29	58	20	40	5,038,218	10	503,822		9.3	4,685.55	300.64	4,986.19
Do	do	SE. ¼ of SE. ¼	27	29	58	20	40	697,970	10	69,797		9.3	649.11		649.11
Burt Prospect	do	NE. ¼ of NE. ¼	27	32	58	20	40			8,000		9.3	74.40		74.40
Pontiac Prospect	do	NW. ¼ of NE. ¼, except railway right of way.	27	32	58	20	34.27			10,000		9.3	93.00		93.00
Do	do	SW. ¼ of NE. ¼ except railway right of way.	27	32	58	20	37.40			10,000		9.3	93.00		93.00
Do	do	SE. ¼ of NE. ¼	27	32	58	20	40			10,000		9.3	93.00		93.00
St. Anthony Prospect No. 2.	do	NE. ¼ of NW. ¼, except railway right of way.	27	32	58	20	37.20	918,766	8	73,501		9.3	683.56		683.56
Richards Prospect	do	NW. ¼ of NW. ¼	27	32	58	20	40			10,000		9.3	93.00		93.00
Burt Prospect	do	SW. ¼ of NW. ¼, except railway right of way.	27	32	58	20	37.06			20,000		9.3	186.00		186.00
Do	do	SE. ¼ of NW. ¼, except railway right of way.	27	32	58	20	37.23								
Iron Land		NE. ¼ of SW. ¼	27	32	58	20	40			5,000		9.3	46.50		46.50
Albany	Pickands, Mather & Co.	**NW. ¼ of SW. ¼**	27	32	58	20	40	1,288,214	19	244,761	8,469	9.3	2,276.28	78.76	2,355.04
Do	do	SW. ¼ of SW. ¼	27	32	58	20	40	4,837,553	19	919,135		9.3	8,547.96		8,547.96
Clark Prospect	Oliver Iron Mining Co.	SE. ¼ of SW. ¼	27	32	58	20	40			10,000		9.3	93.00		93.00
Albany Prospect	Crete Mining Co.	NE. ¼ of SE. ¼	27	32	58	20	40			6,000		9.3	55.80		55.80
Atlas Prospect No. 1		NW. ¼ of SE. ¼, except railway right of way.	27	32	58	20	37.10			10,000		9.3	93.00		93.00
Atlas Prospect No. 2	Oliver Iron Mining Co.	SW. ¼ of SE. ¼, except railway right of way.	27	32	58	20	37.10			64,025		9.3	595.42		595.42
St. Anthony Prospect No. 3.	do	SE. ¼ of SE. ¼	27	32	58	20	40			10,000		9.3	93.00		93.00
Burt Prospect	do	N. ½ of NE. ¼	27	33	58	20	80			8,000		9.3	74.40		74.40
Do	do	NW. ¼	27	33	58	20	160			40,000		9.3	372.00		372.00
Iron Lands		S. ½	27	33	58	20	320			19,600		9.3	182.28		182.28

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

TOWN OF NICHOLS—Continued.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
									Cents.			*Mills.*			
Neville Prospect	Oliver Iron Mining Co.	NE. ¼ of NE. ¼	27	34	58	20	40	942,557	8	$75,404		9.3	$701.26		$701.26
Do	do	NW. ¼ of NE. ¼	27	34	58	20	40	1,830,097	8	146,408		9.3	1,361.59		1,361.59
Do	do	SE. ¼ of NE. ¼	27	34	58	20	40								
Iron Lands		N. ½ of NW. ¼	27	34	58	20	80			10,000		9.3	93.00		93.00
Do		NW. ¼ of NE. ¼	27	35	58	20	40			8,000		9.3	74.40		74.40
Hull	Oliver Iron Mining Co.	NE. ¼ of SE. ¼	27	2	57	21	80	27,935,662	15	4,190,349	$16,140	9.3	38,970.25		38,970.25
Do	do	SE. ¼ of NE. ¼	27	2	57	21									
Do	do	SW. ¼ of NE. ¼	27	2	57	21	40	15,808,424	33	5,216,780		9.3	48,516.05	$150.10	48,666.15
Do	do	SE. ¼ of SE. ¼	27	2	57	21	40	1,129,955	15	169,482		9.3	1,576.18		1,576.18
Do	do	SE. ¼ of NW. ¼ (balance in Hibbing)	27	2	57	21	40	575,495	15	86,324		9.3	802.81		802.81
N. W. I. Prospect No. 1	do	SW. ¼ of NW. ¼	27	2	57	21	40	760,818	8	60,865		9.3	566.04		566.04
Wright-Davis Prospect No. 1	do	NE. ¼ of SW. ¼	27	2	57	21	40			10,000		9.3	93.00		93.00
N. W. I. Prospect No. 2	do	W. ½ of SW. ¼	27	2	57	21	80	2,127,486	10	212,749		9.3	1,978.57		1,978.57
Great Northern Prospect	do	SE. ¼ of SW. ¼	27	2	57	21	40			10,000		9.3	93.00		93.00
Mahoning	Mahoning Ore & Steel Co.	Lot 1	27	2	57	21	40	19,436,936	33	6,414,189	47,490	9.3	59,651.96	441.66	60,093.62
Do	do	Lot 2	27	2	57	21	39.65								
Do	do	Lot 3	27	2	57	21	39.69								
Do	do	Lot 4	27	2	57	21	39.54								
Mahoning Prospect	do	NW. ¼ of SE. ¼	27	2	57	21	40	7,000,000	15	1,050,000		9.3	9,765.00		9,765.00
Do	do	N. ½ of SW. ¼ of SE. ¼	27	2	57	21	20								
Utica	Pickands, Mather & Co.	S. ½ of SW. ¼ of SE. ¼	27	2	57	21	20	107,238	19	20,375	18,865	9.3	189.49		189.49
Do	do	NW. ¼ of NE. ¼	27	11	57	21	40	653,015	19	124,073		9.3	1,153.88	175.44	1,329.32
Do	do	NE. ¼ of NW. ¼	27	11	57	21	40	1,481,500	19	281,485		9.3	2,617.81		2,617.81
Sheridan Prospect	Oliver Iron Mining Co.	Lot 1	27	3	57	21	39.31	2,524,806	10	252,480		9.3	2,348.06		2,348.06
Do	do	SE. ¼ of NE. ¼	27	3	57	21	40								
Lamberton Prospect	do	Lot 2	27	3	57	21	39.25	151,847	8	12,148		9.3	112.98		112.98
Iron Lands		SW. ¼ of NE. ¼	27	3	57	21	40			5,000		9.3	46.50		46.50
Cyprus	Cyprus Mining Co.	NW. ¼ of SW. ¼	27	3	57	21	40	239,053	19	45,420		9.3	422.41		422.41
Do	do	SE. ¼ of SW. ¼	27	3	57	21	40								

Wright-Davis Prospect	Oliver Iron Mining Co.	NE. ¼ of SE. ¼	27	3	57	21	40			20,000		9.3	186.00		186.00
Burt Prospect	do	NW. ¼ of SE. ¼	27	3	57	21	40			20,000		9.3	186.00		186.00
N. W. I. Prospect No. 3	do	SW. ¼ of SE. ¼	27	3	57	21	40	1,741,369	10	174,137		9.3	1,619.47		1,619.47
Mahoning No. 4	Mahoning Ore & Steel Co.	SE. ¼ of SE. ¼	27	3	57	21	40			100,000		9.3	930.00		930.00
Do	do	NE. ¼ of NE. ¼	27	10	57	21	40								
Sweney Prospect	Oliver Iron Mining Co.	SW. ¼ of SW. ¼	27	3	57	21	40	1,892,979	10	189,298		9.3	1,760.47		1,760.47
Do	do	SE. ¼ of SE. ¼	27	4	57	21	40								
Stevenson	Corrigan, McKinney & Co.	E. ½ of SE. ¼	27	7	57	21	80	1,316,014	27	355,323	41,862	9.3	3,304.50	389.32	3,693.82
Do	do	NW. ¼ of SE. ¼	27	7	57	21	40								
Do	do	S. ½ of NW. ¼	27	8	57	21	80								
Do	do	N. ½ of SW. ¼	27	8	57	21	80								
Do	do	SW. ¼ of SW. ¼	27	8	57	21	40								
Mahoning No. 6 Prospect.	Mahoning Ore & Steel Co.	SW. ¼ of NE. ¼	27	8	57	21	40			20,000		9.3	186.00		186.00
Do	do	W. ½ of SE. ¼	27	8	57	21	80								
Chisholm No. 3 Prospect.	Oliver Iron Mining Co.	NE. ¼ of NW. ¼	27	9	57	21	40	654,481	8	52,359		9.3	486.94		486.94
Leetonia	Interstate Iron Co.	W. ½ of NE. ¼	27	10	57	21	80	6,080,156	19	1,155,230	10,850	9.3	10,743.64	100.90	10,844.54
Wright-Davis No. 3 Prospect.	Oliver Iron Mining Co.	SE. ¼ of NE. ¼	27	10	57	21	40			15,000		9.3	139.50		139.50
Mahoning No. 5 Prospect.	Mahoning Ore & Steel Co.	NE. ¼ of NW. ¼	27	10	57	21	40			105,000		9.3	976.50		976.50
Do	do	NW. ¼ of NW. ¼	27	10	57	21	40								
Do	do	SE. ¼ of NW. ¼	27	10	57	21	40								
Do	do	NW. ¼ of SW. ¼	27	10	57	21	40								
W. M. L. No. 1 Prospect	Oliver Iron Mining Co.	SW. ¼ of NW. ¼	27	10	57	21	40	1,567,404	8	125,392		9.3	1,166.15		1,166.15
Carson Lake Prospect	do	NW. ¼ of SE. ¼	27	10	57	21	40	4,201,836	8	336,147		9.3	3,126.17		3,126.17
Agnew	Wisconsin Steel Co	NE. ¼ of NE. ¼	27	11	57	21	40	3,850,738	19	731,640	5,145	9.3	6,804.25	47.85	6,852.10
Parker No. 1 Prospect	Oliver Iron Mining Co.	SW. ¼ of NE. ¼	27	11	57	21	40			15,000		9.3	139.50		139.50
South Agnew Prospect	do	SE. ¼ of NE. ¼	27	11	57	21	40	10,318,055	10	1,031,805		9.3	9,595.79		9,595.79
Do	do	SW. ¼ of NW. ¼	27	12	57	21	40								
Oliver Prospect	do	NW. ¼ of NW. ¼	27	11	57	21	40			50,000		9.3	465.00		465.00
Wright-Davis Prospect	do	SW. ¼ of NW. ¼	27	11	57	21	40			15,000		9.3	139.50		139.50
Do	do	SE. ¼ of NW. ¼, except railway right of way.	27	11	57	21	38.31			15,000		9.3	139.50		139.50
Parker Prospect	do	NE. ¼ of SW. ¼	27	11	57	21	40	4,119,146	8	329,532		9.3	3,064.65		3,064.65
Do	do	SE. ¼ of SW. ¼	27	11	57	21	40								
Wright Prospect No. 5	do	NW. ¼ of SW. ¼	27	11	57	21	40	255,676	8	20,454		9.3	190.22		190.22
Mora Prospect	Mora Iron Co	SW. ¼ of SW. ¼	27	11	57	21	40	200,000	8	16,000		9.3	148.80		148.80
Do	do	NW. ¼ of NW. ¼	27	14	57	21	40								
Agnew No. 2 Prospect	Oliver Iron Mining Co.	NE. ¼ of SE. ¼	27	11	57	21	40	5,802,988	10	580,299		9.3	5,396.78		5,396.78
Parker No. 3 Prospect	do	NW. ¼ of SE. ¼, except railway right of way.	27	11	57	21	36.98			15,000		9.3	139.50		139.50

Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, Minn., for 1908—Continued.

TOWN OF NICHOLS—Continued.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
									Cents.			*Mills.*			
Scranton Prospect	Pickands, Mather & Co.	NE. ¼ of NE. ¼	27	12	57	21	40	6,424,000	8	$513,920		9.3	$4,779.46		$4,779.46
Do	do	NW. ¼ of NE. ¼	27	12	57	21	40	355,000	8	28,400		9.3	264.12		264.12
Do	do	SW. ¼ of NE. ¼	27	12	57	21	40	10,947,000	8	875,760		9.3	8,144.57		8,144.57
Boeing No. 4 Prospect	Oliver Iron Mining Co.	SE. ¼ of NE. ¼	27	12	57	21	40			20,000		9.3	186.00		186.00
Alworth Lands Prospect.	do	N. ½ of NW. ¼	27	12	57	21	80	623,366	10	62,337		9.3	579.73		579.73
Niagara No. 1 Prospect.	do	NE. ¼ of SE. ¼	27	12	57	21	40	544,863	8	43,589		9.3	405.38		405.38
N. W. Imp. Co. Prospect.		NW. ¼ of SE. ¼	27	12	57	21	40			5,000		9.3	46.50		46.50
Gray Prospect	Mora Iron Co	NE. ¼ of NE. ¼	27	14	57	21	40			20,000		9.3	186.00		186.00
Do	do	NW. ¼ of NE. ¼, except railway right of way.	27	14	57	21	39.65								
Do	do	NE. ¼ of NW. ¼, except railway right of way.	27	14	57	21	35.94								
Sheridan No. 3 Prospect.	Oliver Iron Mining Co.	SE. ¼ of SE. ¼	27	34	58	21	40	1,797,541	10	179,754		9.3	1,671.71		1,671.71
Bennett No. 5 Prospect.	do	SW. ¼ of SW. ¼	27	35	58	21	40	1,606,956	8	128,556		9.3	1,195.57		1,195.57
Burrows No. 5 Prospect.	do	SE. ¼ of SW. ¼	27	35	58	21	40			15,000		9.3	139.50		139.50
Mahoning Prospect	Mahoning Ore & Steel Co.	SW. ¼ of SE. ¼	27	35	58	21	40			10,000		9.3	93.00		93.00
Do	do	SE. ¼ of SE. ¼	27	35	58	21	40								
Total								303,053,516		43,906,311	$274,051		419,392.38	$2,623.61	422,015.99

TOWN OF WHITE.

Oliver Prospect	Oliver Iron Mining Co.	SW. ¼ of NE. ¼	24	5	58	15	40	678,076	8	$54,246		15	$813.69		$813.69
Do	do	NW. ¼ of SE. ¼	24	5	58	15	40								
Syracuse Prospect	Pickands, Mather & Co.	Lot 4	24	5	58	15	18.41	486,000	15	72,900	$2,250	15	1,093.50	$33.75	1,127.25
Do	do	Lot 1	24	6	58	15	39.02								
Do	do	Lot 12	24	6	58	15	35								
——— Prospect		Lot 5	24	5	58	15	21			50,000		15	750.00		750.00
Ray Prospect	Oliver Iron Mining Co.	Lot 5	24	6	58	15	46.20	2,336,333	8	186,906		15	2,803.59		2,803.59
Sauntry-Clark Prospect		SE. ¼ of NW. ¼, except railway right of way.	24	6	58	15	36.99			12,000		15	180.00		180.00
Iron Lands		Lot 7	24	6	58	15	52.50			5,000		15	75.00		75.00
Bangor	Pickands, Mather & Co.	Lot 6	24	6	58	15	44.54	1,893,780	15	284,067	2,200	15	4,261.00	33.00	4,294.00
Iron Lands		Lot 11	24	6	58	15	50.35			5,000		15	75.00		75.00
Weed Prospect	Oliver Iron Mining Co.	NE. ¼ of NW. ¼	13	25	59	15	40	254,867	10	25,487		16.9	430.73		430.73
Stephens	do	SW. ¼ of NW. ¼	13	25	59	15	40	143,968	15	21,595	4,640	16.9	364.96		364.96
Do	do	NW. ¼ of SW. ¼	13	25	59	15	40	2,604,156	15	390,623		16.9	6,601.53		6,601.53
Do	do	NW. ¼ of NE. ¼	13	26	59	15	40	4,015,627	15	602,344		16.9	10,179.61		10,179.61
Do	do	SW. ¼ of NE. ¼	13	26	59	15	40	6,505,728	15	975,859		16.9	16,492.02	78.42	16,570.44
Do	do	SE. ¼ of NE. ¼	13	26	59	15	40	3,419,313	15	512,897		16.9	8,667.96		8,667.96
Do	do	SE. ¼ of NW. ¼	13	26	59	15	40	4,171,783	15	625,767		16.9	10,575.46		10,575.46
Do	do	NE. ¼ of SW. ¼	13	26	59	15	40	6,726,081	15	1,008,912		16.9	17,050.61		17,050.61
Stephens North Dev	do	SE. ¼ of SW. ¼	13	23	59	15	40	34,719	8	2,777		16.9	46.93		46.93
Do	do	SE. ¼ of SE. ¼	13	23	59	15	40	37,026	8	2,962		16.9	50.06		50.06
Do	do	NW. ¼ of NW. ¼	13	25	59	15	40	341,424	8	27,314		16.9	461.60		461.60
Do	do	NE. ¼ of NE. ¼	13	26	59	15	40	1,868,733	8	149,499		16.9	2,526.53		2,526.53
Do	do	NE. ¼ of NW. ¼	13	26	59	15	40	7,211,816	8	576,945		16.9	9,750.37		9,750.37
Do	do	NW. ¼ of NW. ¼	13	26	59	15	40	1,367,293	8	109,383		16.9	1,848.57		1,848.57
Do	do	NW. ¼ of SE. ¼	13	26	59	15	40	543,307	8	43,465		16.9	734.56		734.56
Donora Prospect	do	S. ½ of NW. ¼	24	27	59	15	80	6,921,679	8	553,734		15	8,306.01		8,306.01
Do	do	W. ½ of SW. ¼	24	27	59	15	80								
Do	do	SW. ¼ of NE. ¼	24	28	59	15	40								
Do	do	SE. ¼ of NE. ¼	24	28	59	15	40								
Do	do	NE. ¼ of SE. ¼	24	28	59	15	40								
Whiteside-Patterson		Lot 5	24	32	59	15	30.25			20,000		15	300.00		300.00
Total								51,561,709		6,319,682	9,090		104,439.29	145.17	104,584.46

*Tonnage, assessed valuation, rate of taxation, and taxes on iron mines, St. Louis County, **Minn.**, for 1908*—Continued.

TOWN OF WUORRI.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
Nelson Prospect	Oliver Iron Mining Co	NE. ¼ of SE. ¼	22	31	59	17	40	924,206	*Cents.* 8	$73,936		*Mills.* 12.6	$931.59		$931.59
Do	do	SE. ¼ of SE. ¼	22	31	59	17	40								
Do	do	SW. ¼ of SW. ¼	22	32	59	17	40								
Iron Lands		SE. ¼	22	32	59	17	160			20,000		12.6	252.00		252.00
Total								924,206		93,936			1,183.59		1,183.59

UNORGANIZED TOWNSHIP 58½, RANGE 17.

Name of mine.	Operating company.	Description, subdivision.	School district.	Sec.	T.	R.	Acres.	Tonnage.	Ton rate.	Real valuation.	Personal valuation.	Tax rate.	Real estate tax.	Personal tax.	Total tax.
Silver No. 1 Prospect		Lot 1	22	2	58½	17	2.53			$100		11.3	$1.13		$1.13
Silver No. 2 Prospect		Lot 2	22	2	58½	17	5.81			100		11.3	1.13		1.13
Silver No. 3 Prospect		Lot 1	22	3	58½	17	9.81			200		11.3	2.26		2.26
Silver No. 4 Prospect		Lot 2	22	3	58½	17	12.30			200		11.3	2.26		2.26
Silver No. 5 Prospect		Lot 1	22	4	58½	17	14.18			1,600		11.3	18.08		18.08
Silver No. 6 Prospect		Lot 2	22	4	58½	17	10.76			1,600		11.3	18.08		18.08
Silver No. 7 Prospect		Lot 1	22	5	58½	17	12.60			10,000		11.3	113.00		113.00
Silver No. 8 Prospect		Lot 2, except railway right of way.	22	5	58½	17	29.37			357,498		11.3	4,039.73		4,039.73
Silver No. 9 Prospect	Consumer's Ore Co	Lot 1	22	6	58½	17	36.65			33,720		11.3	381.04		381.04
Silver No. 10 Prospect	do	Lot 2	22	6	58½	17	21.45			5,000		11.3	56.50		56.50
Total										410,018			4,633.21		4,633.21

Statement showing tonnages, assessed valuations, and taxes to be paid by mining companies operating in St. Louis County, Minn., for the year 1908.

Name of city, village, or town.	Tonnages.	Valuations.			Taxes.		
		Real.	Personal.	Total.	Real.	Personal.	Total.
City of Ely	6,572,647	$1,512,709	$99,230	$1,611,939	$71,248.60	$4,673.73	$75,922.33
City of Eveleth	4,352,800	1,001,144	34,185	1,035,329	73,183.63	2,498.92	75,682.55
City of Virginia	73,245,065	8,588,981	4,800	8,593,781	193,252.07	108.00	193,360.07
Village of Aurora	4,768,722	1,501,143	46,724	1,547,867	39,215.20	1,228.99	40,444.19
Village of Biwabik	5,647,740	1,042,055	26,290	1,068,345	33,033.14	833.39	33,866.53
Village of Buhl	27,895,708	4,408,960	56,775	4,465,735	71,425.15	919.76	72,344.91
Village of Chisholm	78,447,763	11,663,918	165,347	11,829,265	256,606.20	3,637.63	260,243.83
Village of Gilbert	9,255,470	907,600	24,810	932,410	22,962.28	627.72	23,590.00
Village of Hibbing	249,042,972	39,890,900	310,550	40,201,450	562,461.69	3,394.54	565,856.23
Village of McKinley	178,088	30,432	14,457	44,889	870.36	413.47	1,283.83
Village of Sparta	1,676,672	134,134	....	134,134	4,614.21	....	4,614.21
Village of Mesaba	472,882	37,830	....	37,830	764.17	....	764.17
Town of Clinton	....	5,000	....	5,000	210.00	....	210.00
Town of Biwabik	12,259,837	2,008,006	52,856	2,060,862	59,757.47	1,559.87	61,317.34
Town of Breitung	594,768	136,797	13,266	150,063	4,281.75	415.23	4,696.98
Town of Fayal	13,940,141	3,706,758	114,144	3,820,902	54,489.34	1,677.92	56,167.26
Town of Great Scott	46,276,748	4,977,388	29,550	5,006,938	68,190.22	404.83	68,595.05
Town of Mesaba	5,647,714	571,385	12,099	583,484	11,084.86	234.71	11,319.57
Town of Missabe Mountain	104,984,452	20,481,724	522,598	21,004,322	284,574.38	7,377.42	291,951.80
Town of Morse	1,216,797	279,861	38,722	318,583	10,326.87	1,428.85	11,755.72
Town of Nichols	42,555,040	9,795,283	250,458	10,045,741	88,157.55	2,254.12	90,411.67
Town of Stuntz	303,053,516	43,906,311	274,051	44,180,362	419,392.38	2,623.61	422,015.99
Town of White	51,569,709	6,319,682	9,090	6,328,772	104,439.29	145.17	104,584.46
Town of Wuorri	924,206	93,936	....	93,936	1,183.59	....	1,183.59
Unorganized towns	....	410,018	....	410,018	4,633.21	....	4,633.21
Total	1,044,579,457	163,411,955	2,100,002	165,511,957	2,440,357.61	36,457.88	2,476,815.49

Total valuation and tax of mines, and amount of tax paid to the State for years 1896 to 1908, inclusive.

Year.	Valuation.			Tax.			Amount paid to the State.
	Real.	Personal.	Total.	Real.	Personal.	Total.	
1896	$3,869,383	$157,687	$4,027,070	$85,235.93	$3,613.50	$88,849.43	$11,879.86
1897	3,815,573	352,731	4,168,304	92,016.66	8,877.99	100,894.65	12,629.96
1898	5,497,799	300,747	5,798,546	91,528.12	5,435.06	96,963.18	17,569.59
1899	5,576,783	317,872	5,894,655	113,567.40	6,837.16	120,404.56	17,271.34
1900	7,196,867	648,301	7,845,168	141,696.32	12,570.91	154,267.23	22,201.83
1901	7,706,058	2,703,889	10,409,947	144,933.72	57,452.52	202,386.24	29,460.15
1902	28,493,170	1,481,300	29,974,470	482,738.75	25,815.00	508,553.75	75,835.41
1903	27,947,433	1,919,651	29,867,084	563,447.98	39,236.01	602,683.99	81,537.39
1904	39,791,091	2,112,687	41,903,778	714,476.80	40,488.76	754,965.56	114,397.31
1905	39,794,131	2,499,872	42,294,003	755,939.67	52,484.29	808,423.96	128,150.83
1906	67,225,645	2,626,200	69,851,845	1,100,897.99	47,488.18	1,148,386.17	194,188.13
1907	176,176,689	4,044,441	180,221,130	2,014,657.38	64,959.80	2,079,617.18	627,169.53
1908	163,411,955	2,100,002	165,511,957	2,440,357.61	36,457.88	2,476,815.49	551,154.82

Total State taxes levied upon St. Louis County by State of Minnesota for 1908.

State school taxes[1]	$288, 247.05
State taxes	435, 885.74
State roads, chapter 163, laws of 1905[2]	46, 869.44
State roads, chapter 219, laws of 1905[3]	44, 525.95
For total, see State auditor's biennial report of 1908, statement "O," page 512	815, 528.18
Railroad gross earnings, telephones and vessel tonnage tax, etc., (partly estimated)	1, 500, 000.00
Total to be paid to State by St. Louis County	2, 315, 528.18

In two years St. Louis County has paid the State for State road purposes $177,979.23, and received back from the State for roads $13,700.

According to the State auditor's biennial report just published for the years 1907 and 1908, the total receipts of the State from the several counties in direct tax for 1908 was $3,647,742.65; of this, St. Louis County's contribution was $815,528.18. According to the same report of the State auditor the State received for that year from—

Direct taxes	$3, 647, 742.65
Railroad—Gross earnings	3, 555, 557.84
Telephone companies	101, 286.40
Inheritance tax	43, 454.56
Vessel tonnage tax	8, 320.47
Total	7, 356, 361.92

According to the table published herewith, St. Louis County contributed of this amount $2,315,528.18 or 31+per cent, or nearly one-third. Now bear in mind that these figures have nothing to do with what the State receives from St. Louis County through the sale of public lands and public timber; through royalties on State mineral lands (from the latter source the State has already received over $1,000,000).

On page 2 of the State auditor's report it appears that the State still owns in St. Louis County 302,826 acres of land. The estimated valuation of this land is $1,377,398. St. Louis County has to build roads alongside of these lands, making the land more valuable every year, and yet the State of Minnesota took out of this county in two years for road tax $177,979.23 and only returned to the county in the two years for road purposes $13,700.

Owing to the large holdings of real estate by railroads, one-fourth of the assessed valuation of the city of Duluth is on the exempt tax list. The State takes all the gross-earnings tax, leaving the other three-fourths to pay all the street assessments, sidewalk and sewer assessments, as well as the local taxes.

The village of Proctorknott adjoins the limits of the city of Duluth. In 1907 the valuation of the village was $158,407. The village assessor estimated the amount of exempt property within the village paying a gross-earnings tax to the State at $620,000. There were 430 children enrolled in the schools. The cost of maintaining the schools in 1908 was $12,500, the village expense during the same year was $7,500. This $20,000 that should have been levied upon a valuation of $778,407 had to be levied against a valuation of $158,407, making a tax rate for school and village purposes of 130 mills—virtually a confiscation of property. If this levy could have been assessed against the entire valuation, the rate would have been 26 mills instead of 130 mills.

This is a fair example of what it often means for the State to take the entire special taxes, such as gross-earnings, tonnage tax, etc., and not apportion it the same as other taxes. The system certainly makes some communities pay 50 times their just proportion of State taxes. Equality in distribution of taxes is just as important as equality in assessment.

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[1] Received back from State from this fund, $99,764.90.
[2] Received back from State from this fund, $1,850.
[3] Received back from State from this fund, $4,300.

APPENDIX: PARTS 1 AND 2

REPORT

OF THE

COMMISSIONER OF CORPORATIONS

ON

THE STEEL INDUSTRY

PART I

ORGANIZATION, INVESTMENT, PROFITS, AND POSITION OF UNITED STATES STEEL CORPORATION

JULY 1, 1911

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LETTERS OF TRANSMITTAL.

Department of Commerce and Labor,
Office of the Secretary,
Washington, July 1, 1911.

Sir: I have the honor to transmit herewith Part I of the Report of the Commissioner of Corporations on the Steel Industry, the said part dealing with the organization, investment, profits, and position of the United States Steel Corporation.

Respectfully,
Charles Nagel,
Secretary.

The President.

Department of Commerce and Labor,
Bureau of Corporations,
Washington, July 1, 1911.

Sir: I have the honor to transmit herewith Part I of a Report on the Steel Industry, made to the President under your direction and in accordance with the law creating the Bureau of Corporations. The said part deals with the organization, investment, profits, and position of the United States Steel Corporation.

I desire to mention as especially contributing, under my direction, to the preparation of this report the names of Mr. Luther Conant, jr., Deputy Commissioner, and Mr. Francis Walker, one of my assistants.

Very respectfully,
Herbert Knox Smith,
Commissioner.

To Hon. Charles Nagel,
Secretary of Commerce and Labor.

LETTER OF SUBMITTAL.

Department of Commerce and Labor,
Bureau of Corporations,
Washington, July 1, 1911.

Sir: I have the honor to submit herewith Part I of a Report on the Steel Industry. This part deals with the organization, investment, profits, and position in the industry of the United States Steel Corporation. Additional parts will be submitted later dealing with costs and with prices.

The basic industry of steel making affects the whole people of the United States. Its organization is a matter of public concern (not merely of private interest), and a great national resource, iron ore, lies at the foundation of the business.

The dominant concern is the United States Steel Corporation. There is here set forth (*a*) the causes of the formation of the Corporation; (*b*) its actual investment contrasted with its capitalization; (*c*) its rate of profits; and (*d*) its degree of control in the industry.

The Steel Corporation was the culmination and the result of a remarkable and even dramatic period in the steel industry. Until about 1898 the bulk of the business was distributed among a very considerable number of concerns. There was sharp competition, modified by frequent pools and price agreements of greater or less duration and effectiveness.

In 1898 began an era of great consolidations, with capitalizations ranging from $30,000,000 to $100,000,000, usually mergers of many smaller companies. In most of these, as in the earlier price agreements, the ruling motive was the removal of competition.

They did not, however, finally eliminate competition. On the contrary, a broad movement at once became apparent which threatened competition on a larger scale and probably more severe than any in steel history. This was the process known as "integration."

The situation in 1899–1900 was as follows: There were three great companies—the Carnegie Company, the Federal Steel, and the National Steel—dominating the production of crude and semifinished steel. This may be called the "primary" group. Six other large concerns—the American Steel and Wire, American Tin Plate, American Steel Hoop, American Sheet Steel, National Tube, and American Bridge—severally controlled these lighter finished products. These formed the "secondary" group.

But, large as these concerns were, no one of them was entirely self-sufficient. The "secondary" group was dependent on the "primary" for its crude steel; the "primary" largely dependent on the "secondary" for a market for its products. Few were completely "integrated;" that is, few carried through under one control, with the accompanying advantages, the entire industrial process from the ore to the finished product, linking up ore and coal mines, transportation, blast furnaces, steel works, rolling mills, and finished manufacture.

Immediately, however, came the next step. These great concerns almost simultaneously began the final linking up of the chain of production. Once begun by one concern, others followed in self-defense. The "secondary" companies began to reach back, acquiring ore reserves and crude steel plants. For example, in 1900 the Steel and Wire Company, whose supply of materials had previously been purchased mainly from the Carnegie or the Federal company, planned to make its own steel; likewise the National Tube Company. The "primary" concerns, finding these their chief customers turning into rivals, retaliated by reaching forward to the manufacture of finished products.

Paramount in importance was the ore. The recognition of that importance came strangely late, but, once recognized, it became an axiom that no large concern could stay in the business unless fortified by its own ore reserves. By 1900 the bulk of the Lake ores was in the hands of less than a dozen companies, with a similar concentration in coking coal.

Such efforts on the part of these great concerns, in striving each to "integrate," to make itself wholly independent, threatened to result in a great and sudden increase and duplication of the steel producing and finishing capacity of the country, and to involve them also in an invasion of each other's business.

Thus there was suddenly revealed to the industry what the trade press at the time called "the impending struggle of the giants," a contest between great concerns who under such circumstances might be forced to work out, in rigorous competition, the survival of the fittest.

Such were the conditions in the steel industry in 1900. The spark that lighted the train was the threat of the Carnegie Company to erect a great tube plant near Cleveland, thus invading the field of finished manufacture.

Steel men and the various associated financial interests regarded this situation with much alarm. In such competition they saw a great danger to their businesses, especially to the profitable quasi monopolies in certain branches of the trade. In averting it they also saw a great opportunity. The extraordinary era of industrial expansion was still on; the public were still eagerly absorbing large issues of securities. By merging these conflicting interests into a great corporation, the threatened "steel war" would be averted, and great profits realized from the flotation of securities.

With amazing swiftness, in a few weeks, the United States Steel Corporation was thus organized, and began business on April 1, 1901. Its total capitalization was a little over $1,402,000,000 (including bonds). It is strictly a "holding" company—that is, it does not mine, manufacture, transport, or sell; it simply owns the stock (as a rule all the stock) of its constituent concerns. The concerns acquired were as follows:

Acquired 1901:
- Carnegie Company (of New Jersey).
- Federal Steel Company.
- National Steel Company.
- American Steel and Wire Company.
- American Sheet Steel Company.
- American Tin Plate Company.
- American Steel Hoop Company.
- American Bridge Company.
- National Tube Company.
- Bessemer Steamship Company.
- Shelby Steel Tube Company.
- Lake Superior Consolidated Iron Mines.

Acquired subsequently:
- Union Steel Company (1902).
- Clairton Steel Company (1904).
- Tennessee Coal, Iron and Railroad Company (1907).

Thus competition between these concerns was eliminated, while enormous profits were made from the flotation of securities, with, also, an unparalleled stock commission to the underwriting syndicate, which netted a clear profit of about $62,500,000 in cash.

At its formation the United States Steel Corporation (referred to herein as the "Corporation") controlled about two-thirds of the country's production of crude steel, and from one-half to four-fifths of the principal rolled steel products. It comprised ore, coal, limestone, natural gas, railway and steamship companies, blast furnaces, steel works, rolling mills, finishing plants, and various other properties. It was thus a thoroughly integrated concern, from ore to finished products.

There remained outside the merger a number of great companies of the primary sort, such as Jones & Laughlin, the Pennsylvania, Cambria, Lackawanna, Republic and Colorado Fuel and Iron companies, and numerous concerns of the secondary type. While overshadowed by the Steel Corporation, these included strong, efficient, and growing businesses, furnishing a basis for vigorous competition.

INVESTMENT AND CAPITALIZATION IN 1901.

The Steel Corporation is the greatest industrial concern in the United States, with the largest properties, and of international importance. It is the most conspicuous example of the modern corporate organization of great businesses. As such, the relation of its investment to its capitalization and to its earning power are matters of public concern. The Corporation itself has recognized this fact in its public reports, and has also furnished very extensive information to the Bureau.

The Corporation was organized with (in round numbers) 510 millions of preferred stock; 508 millions of common stock; 303 millions of Corporation bonds, and about 81 millions of underlying and miscellaneous obligations; a total of over 1,402 million dollars.

Speaking broadly, such capitalization amounted to the claim, the representation, that there was a value in this concern which would justify a fair business return on this capitalization. The Bureau finds, on the contrary, that in 1901 the fair market value of its tangible property was about 700 million dollars, slightly less than one-half its capitalization. The other half, the excess of about 700 million dollars, is thus separated and stands out, embodying the essential public questions raised by the Bureau's analysis of its investment. In so far as that excess represented value in 1901, it was value due either to increased earning power from elimination of competition; concentrated ownership of the basic natural resources, iron ore and coal; or, in some degree, integration efficiency.

When such values are capitalized into dividend or interest bearing securities, they involve important public problems. They are merely another name for price policy, and the whole public is ultimately concerned in steel prices. For that sufficient reason the bulk of this part of the report is devoted to an analysis of the Corporation's investment.

Three separate methods have been used in valuing its assets in 1901: (*a*) By historical study of the formation of constituent concerns; (*b*) by market values of the securities of constituent concerns; (*c*) by detailed estimates of physical properties, classified by departments of business. By the first method the valuation is $676,000,000; by the second, $793,000,000; and by the third, $682,000,000. None of these figures includes any merger, integration, or monopolistic factors arising from the combination of 1901. It is precisely the object of the Bureau to distinguish such values from ordinary property value.

The first valuation rests chiefly on evidence that the tangible property of most of the constituent concerns did not exceed the preferred stock. A cash option price was usually fixed by their promoters, and the original owners could take this, or an equal amount of preferred stock, with a bonus in common stock, in the new combinations.

This was the case with the National Steel, American Tin Plate, American Sheet Steel, American Steel Hoop, American Steel and Wire, National Tube, and American Bridge companies. The Federal Steel Company's property somewhat exceeded its preferred stock. In the Carnegie Company, reliable book values indicate that its tangible assets did not exceed its bond issue. The property of the Lake Superior Consolidated Iron Mines was taken as equal to the par value of its stock.

This gives the valuations at the dates of organization. Adding now the surplus earnings of these concerns up to April, 1901, plus the new cash provided for the Corporation, and sundry miscellaneous obligations representing property, gives the total stated above, $676,000,000.

Valuation by market prices of the securities of constituent companies (second method) gives about $793,000,000, or $117,000,000 more than the preceding valuation. Such excess is natural, as this method necessarily covers all property, including intangible merger values in these consolidations prior to the Steel Corporation.

The valuation by departments (third method), the most detailed and conclusive, was as follows:

Manufacturing properties, including blast furnaces	$250,000,000
Transportation properties	91,500,000
Coal and coke properties	80,000,000
Natural gas and limestone properties	24,000,000
Current assets	136,500,000
Ore properties	100,000,000
Total	682,000,000

In July, 1902, in defending its capitalization, the Corporation itself made an estimate similarly classified. If we omit iron-ore properties in each case, that estimate exceeded the third valuation by the Bureau by about $175,000,000, or 30 per cent. But in ore the Bureau's valuation was $100,000,000, while the Corporation's was $700,000,000, seven times as great, a difference of $600,000,000. Thus the ore reserves, the dominant factor in the steel industry, are, in this valuation of its assets by the Steel Corporation, made to stand for the excess of capitalization over value of tangible assets.

And it is true, as is thus tacitly assumed by the Corporation itself, that in these ore holdings, under the present status of ownership and control, there exists an earning power and a control of the industry on which rest largely those ultimate intangible merger values which must be invoked in any attempt to justify its great capitalization.

The determination of the ordinary market value of this ore in 1901 segregates such ordinary value from the peculiar merger and combination values evidently attributed to it by its owner. The Bureau's valuation of $100,000,000 for the ore was reached by a study of market prices for similar properties about 1901; from the price paid by the Corporation for a large part of its own holdings; and from a calculation of the "present worth" of the royalties paid on leased ore. There was a marked agreement in the results by these various methods, and it is certain that $100,000,000 is a liberal figure.

To sum up: The actual market value of the Steel Corporation's entire tangible properties at its formation, omitting all factors of merger, integration, and concentration, was not over $700,000,000, just about one-half its capitalization.

The Bureau does not assume to say that the capitalization should have been one-half what it was, or indorse at this time any particular theory of capitalization. It has simply separated the market value of physical property in this vast concern from value based on earning power derived from intangible factors. It has defined these intangible factors and pointed out their peculiar relationship to price policy and the public interest, to wit, merger value, integration value, monopolistic value, and above all the incalculable industrial power that rests on the control of the bulk of the available iron ore of the country.

1901–1910.

INCREASES IN PROPERTY.—Since its formation, the Corporation, from surplus earnings (allowing for depreciation and changes in securities), has made good much of the original excess of its capitalization over tangible property. That excess in 1901 was about 700 million dollars, or 100 per cent, and in 1910 only about 280 million dollars, or 24 per cent. The total tangible value in 1910 was 1,187 million dollars. As in 1901, there is omitted here all the merger values heretofore referred to, and all appreciation of natural resources above the actual cost thereof to the Corporation.

PROFITS.—The rate of profit has been calculated, not on the Corporation's capital stock, but on the total investment as computed by the Bureau. Operating, administrative, and general expenses, as well as taxes, have been deducted from earnings; also true depreciation, a matter of some intricacy. The Corporation's allowance for depreciation, including mineral exhaustion and obsolescence, has exceeded a necessary allowance. The Bureau has carefully determined from the records of the Corporation the proper depreciation, and has restored the excess to profits.

Thus arrived at, the average rate of profit on actual investment from April 1, 1901, to December 31, 1910, was 12 per cent. It was highest in 1902, 15.9 per cent, and lowest in 1904, 7.6 per cent. The yearly rates do not indicate any pronounced tendency, but have on the whole slightly decreased.

It must be remembered, however, that 12 per cent profit for one small concern out of many is one thing. Other concerns may make much less. It is a very different thing when, as in this case, one-half of the whole industry has been maintained on the level of a 12 per cent profit.

It must be made entirely clear that this 12 per cent is the rate of profit on the whole investment. Were that part of the investment deducted which may be said to be borrowed money, chargeable only with a low fixed rate of return, the rate on the remainder, on that part which may be considered as put in by the stockholders, would be considerably higher.

POSITION IN THE INDUSTRY.—While in production the Steel Corporation from the beginning has overshadowed its principal rivals, and even exceeded all of its competitors combined, its proportion of the total has materially diminished in the ten years of its operation.

In pig iron production, the Corporation has just about maintained its original position; in 1901, 43.2 per cent; in 1910, 43.4 per cent. But in steel, both crude and finished, it has lost ground; in 1901, 66 per cent of the steel ingots and castings; in 1910, only 54 per cent, notwithstanding great additions to its capacity. Rolled steel products generally show an almost steady loss, especially structural shapes and tin plate. Even in rails there has been no gain.

In short, speaking broadly, as against 60 per cent of all crude and finished steel production in 1901, the Corporation now has not much over 50 per cent, indicating conclusively the continuous presence of strong and increasing independent production. The competition of these independents with the Steel Corporation so far as prices are concerned has been modified by the policy of "cooperation." This will be discussed in a later part of the report.

In efficiency, location of plant, and equipment—in capacity rather than actual production—the Corporation is materially stronger than the foregoing figures indicate, and in case of continued trade depression this strength would probably show itself in increased control. In ownership of railroads for handling its materials it stands in a class by itself. It has a strong but not exceptional position in water transportation. Its control of the best qualities of coking coal is very strong, though modified of late by new processes which make other coal more or less available for coking purposes.

Its position in ore reserves, on the other hand, is much stronger than in any other factor in the business. It is almost impossible, and would be unwise, to attempt any quantitative statement of its proportion of the total ore of the country; but of the Lake ores, on which the present steel industry is based, it has about 75 per cent, and this advantage is materially enhanced by its extensive control of the rail transportation of the ore from the mines to the Lakes. The so-called Hill lease made by the Corporation in 1907, with an unprecedentedly high rate of royalty and other onerous conditions, is a striking instance of the policy of the Corporation to maintain a high degree of control of ore. This lease covered enormous ore holdings.

There is much significance, also, in the prevailing custom of leasing ore mines under royalty instead of purchasing outright. This system as applied in the Lake ore region, without any effective restrictions as to size of holdings, plainly facilitates concentration of ore property, as it greatly reduces the investment required to control large bodies of ore. It has unquestionably had a large influence in producing the high concentration of control now existing in Lake ores, as well as elsewhere.

Thus, the industry itself rests physically on the ore; the Corporation based one-half its capitalization on the ore; its profits on ore, as will later be shown, are large; and in the ore is its highest degree of concentration and control. The ore, therefore, is of primary significance in the Corporation's dominance, and in that resource chiefly are involved the industry's problems of ultimate public interest.

Very respectfully,

HERBERT KNOX SMITH,
Commissioner of Corporations.

The PRESIDENT.

REPORT OF THE COMMISSIONER OF CORPORATIONS ON THE STEEL INDUSTRY.

Part I.—ORGANIZATION, INVESTMENT, PROFITS, AND POSITION OF THE UNITED STATES STEEL CORPORATION.

SUMMARY.

The principal features of this part of the Bureau's report upon the steel industry are:

1. The marked development of consolidation, culminating in the organization of the United States Steel Corporation.
2. Capitalization by the United States Steel Corporation far in excess of property values. The Bureau's valuation of the tangible assets in 1901 is $682,000,000, as against $1,400,000,000 of issued securities.
3. An analysis of the cost of the subsequent additions to the property of the Corporation, showing a total investment in tangible property on December 31, 1910, of $1,187,000,000, as against $1,468,000,000 outstanding securities.
4. An average rate of profit from 1901 to 1910 on the Corporation's actual investment, as computed by the Bureau, of 12 per cent.
5. An almost continuous decrease in the Corporation's proportion of the output of principal steel products, but a marked increase in its ownership or control of iron-ore deposits.

DEVELOPMENT OF CONSOLIDATION.

PERIOD PRIOR TO 1898 MARKED BY ACTIVE COMPETITION.

Prior to 1898 the iron and steel business of the United States was distributed among a very large number of interests. There was active and general competition. It is true that in the production of crude steel (ingots), semifinished steel (billets, slabs, sheet bars, etc.), and heavy finished steel products, such as rails, plates, and structural material, substantial prominence had been attained by a few companies. Furthermore, there were occasional instances of consolidation, notably the organization of the Illinois Steel Company in 1889 as a merger of several important steel concerns in Chicago and vicinity. The Carnegie Steel Company (Ltd.), moreover, while not generally considered a consolidation, had in its expansion taken on many features of a consolidation. Despite price agreements of more or less significance and duration these large steel-making companies were, as a rule, in active competition. With respect to such finished products as merchant bars, tubes, sheets, tin plate, wire, and wire nails, the number of manufacturers was large and rivalry between them was keen. In short, the distinguishing characteristic of the industry at this period was competition.

Another feature of the industry at this period was that most of the concerns making the lighter finished products just mentioned did not produce their own steel, but purchased it from the larger steel-making concerns. Again, even some of the largest of these steel-making concerns did not produce all of their pig iron, but bought extensively from ''merchant'' furnaces, and many of them were dependent upon the open market for their supplies of raw materials—ore and coal. On the other hand, the larger steel concerns, as a rule, did not engage extensively in the manufacture of finished lines, except for heavy and comparatively simple products, like rails, structural material, and plates, but instead sold a large part of their output of crude and semifinished steel to others for such elaboration. In other words, integration of the industry had not been carried very far at this early date.

RAPID PROGRESS OF CONSOLIDATION AFTER 1898.

The late nineties, however, witnessed a revolution in the business. One after another, great consolidations were formed in the principal branches of the industry. The result was that the beginning of 1900 found a very substantial proportion of the manufacture of crude and semifinished steel and of such finished products as rails, structural steel, plates, merchant bars, wire rods and wire products, sheets, tin plate, and tubes under the control of less than a dozen important consolidations.

One of the earliest of these mergers was the Federal Steel Company, incorporated in September, 1898. This was a consolidation of the Illinois Steel Company in the Chicago district; the Lorain Steel Company farther east; the Minnesota Iron Company, one of the largest ore concerns in the Lake Superior region (which also owned an important ore railroad and a fleet of ore vessels); and the Elgin, Joliet and Eastern Railway. Integration of the successive stages of production was the chief object of this consolidation. The issued capital stock of the new company was almost $100,000,000; and it secured, roughly, 15 per cent of the steel-ingot production of the country.

The National Steel Company, formed early in 1899, with $59,000,000 issued capital stock, acquired the principal crude-steel manufacturing companies west of the Alleghenies (chiefly in Ohio) other than those owned by the Federal Steel Company and by the Carnegie Steel Company (Ltd.). Its ingot capacity was approximately 12 per cent of the country's total.

The Carnegie interests a little later underwent an important reorganization, which resulted in the incorporation in March, 1900, of the Carnegie Company of New Jersey, with a capitalization of $320,000,000 (half of which was in bonds) to take over the old Carnegie Steel Company (Ltd.), and also the H. C. Frick Coke Company. Inasmuch as these interests had long been affiliated, this reorganization was not a consolidation of formerly competing concerns in the same sense as some of the others here noted. At the time of the formation of the New Jersey concern the Carnegie interests controlled fully 18 per cent of the ingot production of the country.

These three concerns, the Carnegie, the Federal, and the National steel companies, were engaged chiefly in the manufacture of crude and semifinished steel for the trade, or of the heavier finished steel products, such as steel rails, beams, plates, and bars.

There was also a second group of consolidations, chiefly engaged in the manufacture of products which, while comparatively simple, involved somewhat more advanced processes of manufacture. One of these, the American Tin Plate Company, was organized in December, 1898, with $46,000,000 issued capital stock. It acquired practically every tin-plate concern in the country, giving it an almost complete monopoly of that branch of the industry. The American Steel and Wire Company, organized a month later, with $90,000,000 capital stock, secured all the leading concerns engaged in the production of wire, wire nails, and other wire products. The National Tube Company, formed in June, 1899, with $80,000,000 capital stock, acquired concerns controlling the bulk of the production of iron and steel wrought tubing. A somewhat smaller consolidation of 1899 was the American Steel Hoop Company, capitalized at $33,000,000, a merger of the principal concerns making hoop steel, especially cotton ties.

Early in 1900 the American Sheet Steel Company was organized, with $49,000,000 issued capital stock, to take over the principal manufacturers of steel sheets. The American Bridge Company, formed in April, 1900, with $61,000,000 issued capital stock, controlled the great bulk of the heavy bridge construction business of the country, aside from other structural work. The Shelby Steel Tube Company, a less important concern incorporated in February, 1900, with $13,150,000 issued stock, may also be mentioned. It had substantial control of the seamless tubing industry.

All of these companies were later merged into the United States Steel Corporation.

Certain other important consolidations should be also mentioned, which did not enter that combination. One of these was the Republic Iron and Steel Company, organized in 1899, with $47,500,000 issued stock, a consolidation of the principal manufacturers of rolled iron products in the Middle West; it also had some southern plants. In the South there was the Sloss-Sheffield Steel and Iron Company, with $14,200,000 issued capital stock, a consolidation of various furnace interests in Alabama. This company did not make steel.

Concurrently with the formation of these consolidations there occurred an expansion of several older concerns. Thus the Pennsylvania Steel Company, which had an important plant in eastern Pennsylvania and another near Baltimore, in 1901 increased its issued capital stock from $6,500,000 to $27,250,000 and materially extended its manufacturing operations. The Cambria Steel Company was organized in 1898 to lease the old Cambria Iron Company with a plant at Johnstown, Pa. It had an issued capital stock of $16,000,000, this being later increased to $45,000,000. The Lackawanna Iron and Steel Company, capitalized at $3,750,000, determined at the close of 1899 to abandon its old plant at Scranton, Pa., and was succeeded in 1902 by the Lackawanna Steel Company, of New York, with $40,000,000 authorized capital stock (since increased). This company erected a new and much larger plant on Lake Erie, near Buffalo. The Jones & Laughlin interests, whose plants were in the Pittsburg district, reincorporated in 1902 as the Jones & Laughlin Steel Company, with $20,000,000 capital stock (since increased to $30,000,000 aside from a large issue of bonds).

Aside from these reorganizations of leading iron and steel concerns, mention may be made of a steady expansion in operations by such old establishments as the Colorado Fuel and Iron Company in the West and the Tennessee Coal, Iron and Railroad Company in the South. These concerns were, moreover, virtually reorganized at a somewhat later date.

All of these concerns, except the Tennessee company (acquired in 1907), have remained outside the Steel Corporation.

GENERAL CAUSES OF CONSOLIDATION.

The transformation in the steel industry, thus far described, was simply one phase of a general movement toward industrial consolidation at the time. This movement was characterized in varying degree by three especially important features, as follows:

(1) The restriction of competition through combination.

(2) Integration; that is, the linking up of productive processes through acquisition under one control of raw materials and manu-

facturing plants (and in some cases transportation facilities) and through extensions and coordination of manufacturing processes.

(3) The creation of a great amount of inflated securities.

The influence of all these factors should be kept clearly in mind. The first, namely, the restriction or elimination of competition, was the most important. Undoubtedly it was the principal cause of most consolidations in the steel industry. Profits had been sharply reduced by the severe competition which accompanied the depression of the middle nineties, and steel manufacturers were attracted to consolidation as a means of increasing their returns. Indeed, the organizers of some of these consolidations have admitted that the desire to control or eliminate competition was the chief reason for combination.

However, a desire to secure greater economies and advantages through integration undoubtedly played an important part in the movement. This was especially true of the steel business, where such integration has been introduced to an exceptional degree, extending from ownership and production of the primary raw materials to the manufacture of the finished product. A conspicuous feature of this was the acquisition by large iron and steel manufacturers of extensive reserves of raw materials—ore and coal. One of the chief advantages to be gained was the saving of the payment of profits to others on such materials. In the case of ore in particular this was an important consideration because of the rather effective control of ore prices from time to time by ore pools. Whereas in the beginning of the nineties most manufacturers, as already stated, were largely dependent upon the open market for their requirements of ore, by the close of the decade, as a result of this change, the control of large ore reserves had come to be regarded as essential to successful continuance in the industry. The great bulk of the iron-ore deposits of the Lake Superior region had by 1900 passed under the control of less than a dozen interests, chiefly steel-making concerns. The most desirable coking-coal fields of the East had been secured, largely by the same steel-making interests, with almost equal rapidity.

Along with this acquisition of supplies of raw materials went a marked integration of manufacturing processes.

Such integration and coordination of the industry, aside from eliminating the payment of profits to others, made possible the introduction of many economies in the manufacture of steel products, particularly in the saving of fuel and labor. In considering the general causes which led to consolidation in the steel business, therefore, this element of integration should be given due weight.

Restriction of competition and integration of industry were, however, by no means wholly responsible for the rapid progress of consolidation. The creation of new securities for the sake of a stock-market profit was a very important consideration. The public demand for such securities was unusually active at this time. Indeed, the proportions of this movement were largely determined by the opportunity to market the securities thus created. So long as the demand for such issues was maintained the supply was steadily increased.

The importance of this stock-market factor in the consolidation movement, whether in the iron and steel industry or in other industries, is too often overlooked. Consolidation, while in large measure an outgrowth of technical and industrial conditions, was by no means exclusively so. Instead, there was frequently a marked reluctance on the part of owners to dispose of the businesses which they had built up, and in many cases the controlling inducement to sell out was the enormous price obtainable in the securities of these great consolidations.

The consolidation of wire interests is a conspicuous illustration of the great inflation of capitalization thus brought about. In the organization of the American Steel and Wire Company of Illinois, in March, 1898, each $100 of the stock of the Consolidated Steel and Wire Company, one of the constituent concerns (and itself a consolidation of seven plants) received $175 of preferred stock and $175 in common stock of the new company, or $350 of new securities for every $100 of old. Undoubtedly the stock of the Consolidated Steel and Wire Company was worth considerably more than par from the standpoint of earnings. A few months later each $100 of the preferred stock of the American Steel and Wire Company of Illinois received $100 in preferred stock and $60 in common stock of the American Steel and Wire Company of New Jersey, while each $100 of the Illinois company's common stock received $120 in common stock of the new concern. Thus each $100 stock of the old Consolidated company became $490 in the stock of the New Jersey concern. (Still later, in the merger of the American Steel and Wire Company of New Jersey into the United States Steel Corporation, there was some further increase.)

A noteworthy feature of this general inflation of securities was the heavy stock commissions received by the promoters of these consolidations as their compensation. In the case of the American Tin Plate Company $10,000,000 of common stock admittedly went to the organizers, and in the case of the National Steel Company and also of the American Steel Hoop Company at least $5,000,000. In the organization of the American Steel and Wire Company $11,600,000 of the common stock went to the promoters and underwriters. In the organization of the National Tube Company $20,000,000 of common stock appears to have been issued as a commission to the promoters or bankers, and in the case of the American Bridge Company at least $7,250,000 of common stock, and possibly twice that amount. The underwriting syndicate of the Federal Steel Company received approximately $5,680,000 preferred stock and $8,400,000 of common stock in return for approximately $4,800,000 cash and their services in organizing that concern. There were similar large payments in the case of some others of these steel consolidations. In the case of the Carnegie Company apparently no commission was paid, the reorganization of this concern being handled by the former owners without the assistance of outsiders.

Out of the proceeds of such stock commissions frequently some organization expenses had to be met, but in the main these commissions were intended as compensation to the promoters of these consolidations. It should be noted that the size of these commissions frequently was fixed by the promoters themselves, since they determined the capitalization of the consolidated company.

CAUSES OF THE FORMATION OF THE UNITED STATES STEEL CORPORATION.

The fundamental causes for the formation of the United States Steel Corporation were substantially the same as those which gave rise to the earlier consolidations already described, namely, restriction or prevention of competition; integration; stock inflation. The same causes, though in varying degree, were here present, and the same processes were here repeated, though in a more comprehensive manner and on a vaster scale.

A striking and surprising result of the consolidation movement in the late nineties, just described, was that while several of the great steel consolidations aimed to and did secure a substantial degree of monopoly of their particular branches of the business, nevertheless competition was not thereby destroyed. Instead, it soon developed that the formation of these great consolidations was likely to bring on an era of competition more severe than any the industry had yet seen. The reason for this is plain. At the bottom, such "particular branches" were not essentially separate. In the commercial and technical development of the business they tended naturally to overlap. In other words, this unforeseen outcome of consolidation was largely due to the tendency of these great concerns to secure greater integration, to make themselves virtually independent in all stages of production from the ore up.

The conditions were quite remarkable. Competition was threatening to break out in much more violent form in the steel industry. On the other hand, the upward swing of business in the United States had not exhausted its vigor, and the readiness of the business world to support vast commercial and financial undertakings was unabated.

Thus the industrial situation presented an extraordinary motive to form a great merger, as well as to avert imminent competition.

The active integration movement, furthermore, presented another very serious consideration. The extensions made by the crude-steel makers into the territory of those manufacturing more finished products, and vice versa, meant not only increased competition, but also a sudden and great increase in the productive capacity for crude steel and steel products, an increase that might place production, for some time at least, far beyond the country's power of consumption. The leading men connected with the steel industry feared such overinvestment in plant, which might, they felt, seriously disturb general industrial and financial conditions. Again, they feared the breaking down of the extremely profitable quasi monopolies already established.

INDUSTRIAL SITUATION.—As these conditions were the most critical factors in the position of the steel industry at the close of 1900 and the beginning of 1901, it is necessary to recite them in some detail.

Taking first what may be called the "primary" group of consolidations, namely, those producing crude and semifinished steel: The Carnegie Company was the most important of these. It depended for marketing its semifinished steel products on other manufacturers for whom these products were raw materials. As to its own raw materials it was quite independent, with vast holdings of iron ore and coking coal, as well as extensive transportation properties.

The Federal Steel Company was in much the same general position as the Carnegie, and integrated to a similar degree, though without quite as strong an organization or financial condition.

The National Steel Company (a "Moore" concern) was, like the other two, partly dependent on other manufacturers for a market for its products, but this company had a peculiar advantage through its intimate relations with the rest of the so-called "Moore" concerns, the Sheet, Tin Plate, and Hoop consolidations. It was also integrated to a degree comparable with that of the other two.

A very important concern closely related to this primary group of steel-making companies was the Lake Superior Consolidated Iron Mines, with great holdings of ore in the Lake region, an ore railroad to the upper Lake ports, and an affiliated fleet of ore vessels. It was not a manufacturing concern.

The "secondary" group consisted of those concerns making the more finished products.

Of these, the American Steel and Wire Company at its organization had a substantially monopolistic control of wire products. It was not, however, strong in its raw materials, namely, steel billets, although subsequent to its organization it did acquire iron ore, coal property, and a vessel fleet; but it was by no means completely integrated in 1900.

The National Tube Company at its formation controlled the greater part of the country's production of wrought pipe and tubes. Two of its chief plants were fairly well integrated. The company, however, purchased a large part of its crude steel.

The American Bridge Company handled a large part of the country's business of heavy bridge construction, but depended almost entirely on other concerns for its raw material, structural steel, particularly on the Carnegie Company.

The American Sheet Steel, American Tin Plate, and American Steel Hoop companies were all "Moore" concerns. They largely controlled their lines of production, but were integrated to only a small extent. All three, however, being affiliated, as stated above, with the National Steel Company (the crude-steel concern of the "Moore" companies), were thus protected to a certain extent as to the supply of their raw materials.

This general situation was obviously one of transition, of change, in view of the prevailing movement toward complete integration, and the resulting invasion of these great concerns into each other's business field. And the change promptly came. In particular, the so-called "secondary" concerns began to extend their business backward to the production of pig iron and crude steel and the mining of raw materials. This tended to lessen the market and injure the primary concerns, particularly the Carnegie Company, and to a less degree the Federal Steel Company.

For example, the American Steel and Wire Company, the constituent concerns of which had previously bought most of their supply of billets or wire rods from either the Federal Steel Company or the Carnegie company, planned in 1900 to make its own pig iron and steel.

The National Tube Company, which had bought a large part of its raw materials from the Carnegie concern, proposed to erect additional blast furnaces and steel works.

The "Moore" companies (National Steel, Tin Plate, Sheet Steel, and Steel Hoop) were rapidly making themselves independent through the enlargement of the crude steel capacity of the National Steel Company. This latter concern, moreover, secured extensive ore and coal properties and a fleet of Lake ore vessels. The constituent companies of these Moore concerns had formerly bought large amounts of steel from the Carnegie and other "primary" companies.

The obvious result of these extensions was that the Carnegie Company and to a less degree the Federal Steel Company saw the danger of the loss of a part of their market for semifinished steel, and the probability that their former best customers would become their rivals. These "primary" concerns, therefore, promptly entered upon a policy of retaliation. The Federal Steel Company prepared to take up the manufacture of several finished products, particularly structural material, tubes, and universal plates. The Carnegie interests also considered building new finishing mills.

Finally, at the close of 1900, the Carnegie interests announced that they would erect an immense tube plant on the shores of Lake Erie. Mr. Carnegie stated that this move was largely the result of the plans of the National Tube Company to provide its own supplies of crude steel.

As already shown, the economic forces at work in the industry at that time, particularly the general tendency toward integration, clearly foreshadowed a period of competition and duplication of capacity. Under these circumstances this aggressive move of the Carnegie interests precipitated a crisis. Conditions in the steel industry were unsettled. Both the daily press and trade journals were actively discussing the coming "battle of the giants."

INTERESTS OF FINANCIERS.—This critical trade situation was intensified because of the importance which the securities of several of these steel concerns had assumed on the stock market. A period of violent competition in the steel industry would inevitably have been followed by a great decline in the value of these securities. This would have been very embarrassing to the financial groups which were behind these consolidations. A more important matter was that the financial backers of some of these steel concerns had extensive commitments in other directions, which might be jeopardized by such an acute struggle in the steel industry. From the standpoint of these financiers, therefore, the situation presented at once a great danger and a great opportunity.

From a financial point of view there were four important groups, which were more or less distinct, namely, "Morgan," "Moore," "Carnegie," and "Rockefeller."

The Morgan group, which included the Federal Steel, National Tube, and American Bridge companies, enjoyed of course the advantage of a strong financial support, but these financial interests were extensively committed in other lines of business, especially in railroad financiering. It may be noted that there were reports at this time that the Carnegie interests were contemplating the construction of a railroad from Pittsburg to the Atlantic seaboard. This threat, if made good, would have created an extremely disturbing factor in the trunk-line situation.

Corporation was formed, and acquired, on April 1, 1901, or shortly thereafter, the following concerns:

Acquired April 1, 1901:
- Carnegie Company (of New Jersey).
- Federal Steel Company.
- American Steel and Wire Company.
- National Tube Company.
- National Steel Company.
- American Tin Plate Company.
- American Steel Hoop Company.
- American Sheet Steel Company.

Acquired subsequently in 1901:
- American Bridge Company.
- Lake Superior Consolidated Iron Mines.
- Bessemer Steamship Company.
- Shelby Steel Tube Company.

Further important acquisitions were made later, as noted hereafter.

By this merger substantially two-thirds of the steel-ingot production, and a proportion of the principal rolled-steel products of the country, varying from one-half to four-fifths, or more, was transferred to the control of a single concern. The Steel Corporation's share of the total pig-iron production was only about 43 per cent. However, of the output of steel-making pig iron of the country, the Corporation's share was not less than 58 per cent.

The position taken by the Steel Corporation is that this great aggregation of property was in the main an assembling and coordination of different branches in the industry, the primary object of which was to secure greater efficiency and integration, and, of course, saving of the payment of profits to others. Their contention is that most of the constituent concerns of the Corporation were not in actual competition with one another, and they are disposed to minimize the restriction of competition brought about as a result of this great merger.

It is true that certain of the constituent consolidations, as, for instance, the American Steel and Wire Company and the National Tube Company, were not competing with one another at this particular period. However, there was active competition between the three principal crude-steel concerns—the Carnegie Company, the Federal Steel Company, and the National Steel Company—while these concerns, to some extent at least, were in competition with some of the large consolidations making the lighter finished products. Moreover, the fact should not be lost sight of that nearly all of the latter class of consolidations were originally created with the intention of restricting competition. A more important matter is that a period of violent competition among all of these concerns was imminent at this juncture, and that the United States Steel Corporation was organized for the specific purpose of preventing the new competition thus threatened as well as eliminating that already existing among these concerns. The opportunity for reaping a huge promoter's profit out of this situation undoubtedly was an important consideration in bringing about the merger. Nevertheless the primary object was the restriction or prevention of competition.

Several of the largest iron and steel concerns which were not absorbed by the Steel Corporation were at that time engaged in the manufacture of special products which did not bring them into sharp conflict with the Corporation, or confined their activities to a more limited field than that of the Corporation. The failure of the Corporation to include some of these concerns was, therefore, less significant than might at first sight appear. However, several of the concerns remaining outside, notably the Jones & Laughlin interests, the Lackawanna Iron and Steel Company, the Republic Iron and Steel Company, the Pennsylvania Steel Company, and the Cambria Steel Company, were important rivals of the Corporation. The Colorado Fuel and Iron Company in the West, on account of its geographical location, was not a serious competitor. Nevertheless, negotiations were entered into shortly after the organization of the Steel Corporation for the acquisition of that concern, but were not consummated. The Tennessee Coal, Iron and Railroad Company in the South was at this time chiefly concerned with the production of foundry pig iron. As noted below, this concern was acquired by the Steel Corporation in 1907.

DESCRIPTION OF THE UNITED STATES STEEL CORPORATION IN 1901.

Some idea of the magnitude of the Steel Corporation, as well as of its character as a consolidation of combinations, is brought out by Table 3, facing page 107, which gives its principal constituent companies in 1901, with the subsidiaries of these at that date, or the principal properties, where the ownership was in fee instead of by stock.

At its organization the Corporation acquired steel works with an annual capacity of over 9,400,000 tons of crude steel and more than 7,700,000 tons of finished rolled steel products; several railroads, with over 1,000 miles of main track and a large mileage of second track and sidings; a fleet of 112 Lake ore vessels; iron-ore reserves in the Lake region estimated at about 500,000,000 to 700,000,000 tons (see p. 28); more than 50,000 acres of coking-coal lands with a great acreage of other grades of coal, not to mention numerous miscellaneous properties.

SUBSEQUENT ACQUISITIONS AND ADDITIONS.—Since its organization the Steel Corporation has very greatly increased the capacity of its plants and the scope of its operations. The bulk of this increase has been due to the construction of new plants, or the enlargement of old ones, the acquisition of additional ore and coal properties, and similar extensions, such additions being paid for largely from earnings.

The Corporation, however, has made three important acquisitions of competing concerns since 1901. The first of these was the purchase in December, 1902, of the Union Steel Company, which had just absorbed the Sharon Steel Company. This concern was located in the Pittsburg district and was an aggressive competitor in several branches of production in which the Steel Corporation was actively engaged. It also had a valuable ore property. The company was backed by very influential interests, including H. C. Frick, and it was desired by the Steel Corporation for these reasons even more than for its properties.

In May, 1904, the Corporation purchased the Clairton Steel Company, a somewhat smaller concern. It was in the hands of receivers at the time of its acquisition.

The third and most important of these acquisitions was the Tennessee Coal, Iron and Railroad Company, in 1907. By the purchase of this company the Steel Corporation secured the leading factor in the southern iron and steel industry (the Tennessee concern having by this time erected steel works of considerable capacity), and, what was of more consequence, the extensive ore and coal reserves of that company. The purchase of this concern, which was made in the height of the panic of 1907, had been preceded by unsuccessful attempts on the part of other interests to use it as a basis of a rival consolidation which would also include the Sloss-Sheffield Steel and Iron Company and the Republic Iron and Steel Company.

CAPITALIZATION AND INVESTMENT OF THE UNITED STATES STEEL CORPORATION IN 1901.

The relation of the assets and actual investment of this great combination to the securities issued is of high public importance in estimating both the status of the Corporation itself, the reasonableness of its profits, and its other effects on the interests of the public.

The Corporation in 1901, after its organization had been fairly completed (and including the acquisition of the Shelby Steel Tube Company, which did not occur until August), had a total outstanding capitalization, including underlying bonds, sundry mortgages, and purchase-money obligations (but excluding $535,407 unacquired stock of subsidiaries), as follows:

Preferred stock	$510,205,743
Common stock	508,227,394
Steel Corporation bonds	303,450,000
Underlying bonds	59,091,657
Purchase-money obligations and real-estate mortgages	21,872,023
Total	1,402,846,817

For the purposes of the Bureau's investigation it was essential to make an analysis of the actual value of the physical properties of the Corporation in 1901, upon which this huge capitalization was based. The Bureau has made such an analysis by three different methods:

First, by organization history—that is, from historical study of the organization and investment of the constituent concerns at the time of their formation.

Second, by market value of securities—that is, by computation of the public estimate of the value of the properties of those constituent concerns as reflected in the market prices of their securities.

Third, by departments of business—that is, by a detailed estimate of the physical properties of the company by departments of its business, computed from all available data and with an especially elaborate calculation of the value of the ore property.

The valuation arrived at by the Bureau by the first method, which is chiefly for tangible assets, is approximately $676,000,000; the valuation arrived at by the second method, which includes intangible considerations, is approximately $793,000,000; the valuation arrived at by the Bureau by the third and more precise method, this being for tangible assets only, is approximately $682,000,000.

None of these valuations includes any value imparted to these properties by the very act of merging them into the Steel Corporation and treating them as a unified going concern. Obviously such a value must be largely due to the element of concentration of control and consequent elimination of competition, which value should not be included in the present discussion. (See p. 50.)

It may be noted at this point that the United States Steel Corporation is a holding company, practically its entire property consisting of the securities of a number of subsidiary concerns, some of which, moreover, in turn own stocks in underlying concerns. For the sake of brevity and clearness in this report, however, it will be convenient to refer to the physical properties thus controlled as though they were directly owned by the Corporation itself. For all practical purposes such is indeed the fact.

ESTIMATED VALUE OF CORPORATION'S PROPERTY, BASED ON STUDY OF ORGANIZATION OF CONSTITUENT CONCERNS.

The Bureau's estimate of the value of the Steel Corporation's property, arrived at by a study of the organization of the constituent concerns—approximately $676,000,000—includes the entire physical property and not merely the equity over and above bonded indebtedness (which indebtedness, for these constituent concerns, is assumed to represent an equivalent investment in property). It includes only a negligible allowance for intangible considerations.

In the main the valuations arrived at are based upon the method by which these constituent companies were organized. A very common basis of organization was to determine upon cash prices for the plants acquired and then to give the vendors (the owners of the plants) the option of taking the price in cash or of taking preferred stock up to the full amount of the cash option figure, with a large bonus in common stock. New cash capital frequently was raised on the same terms. The result of this method of organization was that the preferred stock of the consolidated concern at its original organization represented practically the entire value of the property acquired—certainly the entire value of the physical assets.

This was the method followed in the four "Moore" companies, viz, National Steel Company, American Tin Plate Company, American Sheet Steel Company, and American Steel Hoop Company.

In the case of at least three of these companies a considerable block of the common stock was issued to the promoters as a "commission" for their services; in the case of the American Sheet Steel Company apparently some preferred stock was also issued for this purpose.

In the organization of the American Steel and Wire Company the preferred stock likewise covered the entire value of the physical property acquired at the time of organization, all of the common stock being issued either as a bonus or for underwriting services. The same method, substantially, was followed in the organization of the National Tube and American Bridge companies.

The common stock of the Federal Steel Company, however, appears to have had some property value back of it. Taking its principal subsidiary concerns, the Illinois Steel Company and the Minnesota Iron Company, at their book values—roughly $19,250,000 and $22,950,000, respectively—and allowing $4,000,000 to cover its Lorain and Johnson companies (this being approximately the price paid, reduced to a cash basis), and $4,200,000 for the $6,000,000 stock of the Elgin, Joliet and Eastern Railway, the total indicated property value (over and above underlying indebtedness), including the net amount of new cash capital provided, was, roughly, $62,100,000 against which the Federal company issued, approximately, $99,700,000 of stock. The Bureau has allowed as an outside figure a total of $63,000,000. The method of arriving at this valuation is carefully explained in the text of the report. While made independently, it very closely agrees with the average stock market valuation of Federal Steel stocks during the period from September, 1898, to December 31, 1900.

The valuation of the Carnegie Company's property is more difficult because the organization of this concern was arranged privately by the former owners, and because its securities were never actively dealt in. The book value of the property of the old Carnegie Steel Company

(Ltd.) (which had approximately a 29½ per cent interest in the H. C. Frick Coke Company) on March 1, 1900, or just before these two concerns were transferred to the Carnegie Company of New Jersey, was, roughly, $81,500,000. This book value, while correct for some of the properties of the company, undoubtedly understated the value of others, particularly the item of "investments." Using such data as were available, the Bureau has arrived at the conclusion that the tangible property of the Carnegie concern in March, 1900, was not in excess of the $160,000,000 bond issue (the company also issued $160,000,000 of stock). A suggestive fact is that in organizing the New Jersey company $125,000,000 of bonds, and a like amount of stock, were allotted for the various Carnegie steel properties, and $35,000,000 of bonds and an equal amount of the stock for the H. C. Frick Coke Company. This clearly is analogous to a similar distribution of preferred and common stock in the case of several of the other constituent concerns of the Steel Corporation. These terms, in connection with other evidence presented in the body of the report, indicate that the Carnegie interests issued bonds up to substantially the full amount of tangible property, leaving the stock to cover intangible considerations.

The Lake Superior Consolidated Iron Mines has been entered in the Bureau's estimate at a value equal to the par of its outstanding stock, approximately $29,400,000. This appears to be sufficiently liberal. In the middle nineties the stock sold as low as $10 per share (par $100); in 1899 it sold as low as $40 per share, and the highest reported price in 1900 was $75 per share, the sales being very infrequent. While the market price may have been depressed by the fact that the company had never paid a dividend and did not publish annual reports, these figures apparently do not warrant a valuation of the property of this concern in excess of the par value of its stock.[1]

The Shelby Steel Tube Company, acquired in August, 1901, was purchased for $1,791,038 preferred and $2,004,550 common stock of the United States Steel Corporation. This covered practically the entire stock of the Shelby concern. The current market value of the Corporation's stock thus issued was approximately $3,000,000, and this figure has been taken as representing the value of this company at its acquisition rather than the par value of the preferred stock ($5,000,000), as in several other cases.

The Bessemer Steamship Company has been entered in the Bureau's estimate at $8,500,000, the purchase price, this acquisition being temporarily financed by the issue of purchase-money obligations to that amount.

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[1] The Bureau has, however, added the moderate surplus of the company on April 1, 1901, this being included in the item of $117,700,000 in the table on page 19. (See also Table 12, p. 167.)

The Steel Corporation also acquired a one-sixth interest in the Pittsburg Steamship Company and the Oliver Iron Mining Company (the other five-sixths interest in these concerns already being owned by the Carnegie Company; also, of course, acquired by the Corporation). Owing to the difficulty of estimating ore property in small parcels, this one-sixth interest in the two concerns has been credited in the current estimate with a value equal to the par of the United States Steel preferred stock issued therefor—namely, $9,250,000—(an equal amount of common stock was also paid; this has been regarded as a bonus). While this allowance is undoubtedly too high, the excess over a more accurate valuation is relatively so small as not to be important.

The foregoing valuations, it should be kept in mind, are applicable at the dates of the respective organizations of the companies named, except in the case of the last four concerns, where the figures given apply to the dates of acquisition by the Steel Corporation. By April, 1901, the various constituent concerns had increased their property investment, through surplus earnings, to the extent of approximately $117,700,000. Adding this sum, together with $25,003,000 new cash capital provided the Steel Corporation, to the valuations stated above and including underlying bonds, purchase-money obligations, and real-estate mortgages (which also cover any additions to the property made in this way), brings the indicated total investment in the physical property acquired by the Steel Corporation in 1901 up to approximately $676,000,000, as shown by the table on the succeeding page.

ESTIMATED VALUES OF TANGIBLE ASSETS OF CONSTITUENT CONCERNS OF THE UNITED STATES STEEL CORPORATION AT THE DATES OF THEIR RESPECTIVE ORGANIZATIONS, WITH ADDITIONS TO APRIL 1, 1901.

[Tentative estimate; for final estimate see p. 36.]

Constituent concerns.	Estimated values of tangible assets at dates of respective organizations.
Carnegie Company (New Jersey)	$160,000,000
Federal Steel Company	63,000,000
American Steel and Wire Company (New Jersey)	40,000,000
National Tube Company	40,000,000
National Steel Company	27,000,000
American Tin Plate Company	18,325,000
American Steel Hoop Company	14,000,000
American Sheet Steel Company	17,000,000
American Bridge Company	[1] 31,374,000
Lake Superior Consolidated Iron Mines	[1] 29,400,000
Shelby Steel Tube Company	[1] 3,000,000
One-sixth interest in Pittsburg Steamship Company and Oliver Iron Mining Company	[2] 9,250,000
Total	452,349,000
Add underlying bonds, mortgages, and purchase-money obligations of above companies at par	[3] 60,000,000
Total valuation at time of organization of constituent companies (except in cases noted)	512,349,000
Add:	
Surplus earnings of the companies acquired	117,727,000
Investment through bond issues, purchase-money obligations, etc	[3] 20,964,000
Cash capital provided	25,003,000
Approximate grand total of value of physical property in April, 1901	676,043,000

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[1] Estimated value of property at time of its acquisition by the United States Steel Corporation, instead of at its organization.

[2] Amount of preferred stock of United States Steel Corporation issued therefor; this probably excessive, but allowed here in absence of other data.

[3] The total of such indebtedness, $80,964,000, is known; the division here given was partly approximated. The item of $20,964,000 includes the Bessemer Steamship Company.

VALUATION OF CONSTITUENT COMPANIES AS INDICATED BY MARKET PRICES OF THEIR SECURITIES.

The valuation of the properties of these constituent concerns arrived at by the second method of analysis is based upon the market value of their securities. Using average weekly prices, where available, and again adding underlying bonds, purchase-money obligations, and real-estate mortgages, at par, as well as $25,003,000 of new cash capital provided for the Steel Corporation, the indicated valuation is approximately $793,000,000, as shown in the table on the next page.

APPROXIMATE MARKET VALUATION OF SECURITIES ACQUIRED BY UNITED STATES STEEL CORPORATION IN 1901, AS INDICATED BY AVERAGE MARKET PRICES, 1899–1900.

Constituent concerns.	Amount of stock acquired by United States Steel Corporation.	Average market price of stock in 1899–1900.	Value at average price.
Stocks regularly quoted:			
Federal Steel Company—	*Par value.*	*Per cent of par value.*	
Preferred	$53,260,200	76.38	$40,680,141
Common	46,483,700	50.04	23,260,443
American Steel and Wire Company—			
Preferred	39,999,000	89.41	35,763,106
Common	49,981,400	48.26	24,121,024
National Tube Company—			
Preferred	40,000,000	94.20	37,680,000
Common	40,000,000	48.72	19,488,000
National Steel Company—			
Preferred	26,996,000	91.16	24,609,554
Common	31,970,000	41.67	13,321,899
American Tin Plate Company—			
Preferred	18,325,000	84.77	15,534,103
Common	28,000,000	34.77	9,735,600
American Steel Hoop Company—			
Preferred	14,000,000	77.34	10,827,600
Common	19,000,000	32.11	6,100,900
American Bridge Company [1]—			
Preferred	31,357,600	93.10	29,193,926
Common	30,946,400	43.88	13,579,280
Shelby Steel Tube Company [1]—			
Preferred	4,776,100	56.48	2,697,541
Common	8,018,200	10.90	873,984
Stocks not actively quoted:			
American Sheet Steel Company [1]—			
Preferred	24,499,600	[2] 65.88	16,140,336
Common	24,499,600	[2] 19.00	4,654,924
Lake Superior Consolidated Iron Mines	29,413,905	[3] 75.00	22,060,429
Carnegie Company:			
Bonds	159,450,000	105.00	167,422,500
Stock	160,000,000	[4] 100.00	160,000,000
Oliver Iron Mining Company, one-sixth interest	200,000		[5] 9,250,000
Pittsburg Steamship Company, one-sixth interest	221,700		
Total	[6] 881,398,405		686,995,290
Mortgages and purchase-money obligations			21,872,023
Underlying bonds and scrip at par			59,091,657
Cash capital			[7] 25,003,000
Grand total			792,961,970

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[1] No quotation in 1899.

[2] Mean of highest and lowest prices in Pittsburg market in 1900, weekly quotations not being available.

[3] Asked price in 1900. Does not include lower prices recorded in 1900.

[4] Only 13 shares known to have been sold in open market.

[5] Not based on stock quotations but amount of United States Steel Corporation preferred stock issued therefor at par.

[6] Does not include $535,407 unacquired stock in subsidiary concerns.

[7] Including $3,000 paid in by original incorporators.

The average prices given cover the periods from the respective dates of organization to December 31, 1900. The market quotations from January 1, 1901, to March 31, 1901, were so largely influenced by the prospective organization of the Steel Corporation that they have been properly excluded in computing the foregoing averages; their inclusion, however, would have added only about $6,000,000 to the grand total reached.

It should be noted that the stocks of several of these concerns were inactive, particularly those of the Carnegie Company and the Lake Superior Consolidated Iron Mines. The former stock has been taken at its par value, since the few recorded sales of the stock (but 13 shares in all) were at that figure. The Lake Superior Consolidated stock has been taken at $75 per share—the highest reported figure for a number of years prior to 1901—since, on account of the inactivity of this stock, an average of the prices in 1899 and 1900 might be unfair. (In the preceding estimate the stock was reckoned at par.)

The Carnegie bonds have been entered at their market quotation. Although the premium on these securities might fairly be ignored in a calculation of this sort, it was deemed better to allow it.

When it is taken into consideration that these market prices include, of course, an allowance for earning power and other intangible considerations, this total of $793,000,000 indicates that the preceding valuation of $676,000,000 for the tangible property alone is sufficiently liberal.

ESTIMATED VALUATION OF PROPERTY OF STEEL CORPORATION IN 1901 BY DEPARTMENTS OF ITS BUSINESS.

Both of the foregoing estimates are necessarily somewhat general. The estimate of the Bureau, based on the third method stated—that is, by departments of the Corporation's business—was prepared on a more detailed basis.

Before proceeding to discuss this estimate, it should be noted that the Steel Corporation itself, in July, 1902, in litigation then pending, submitted an estimate of the value of its assets, by principal departments, as follows:

ESTIMATE OF VALUE OF TANGIBLE ASSETS OF UNITED STATES STEEL CORPORATION ON JULY 1, 1902, SUBMITTED BY THE CORPORATION IN THE "HODGE" SUIT.

Ore properties	$700,000,000
Plants, mills, fixtures, machinery, equipment, tools, and real estate	300,000,000
Blast furnaces	48,000,000
Coal and coke	100,000,000
Transportation properties	[1] 80,000,000
Natural gas fields	20,000,000
Limestone properties	4,000,000
Cash and cash assets [2]	148,291,000
Total	1,400,291,000

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[1] President Schwab stated that the Corporation's estimate for this item was the value after allowing for $40,340,000 of indebtedness. (See p. 36.)

[2] As of June 1, 1902. See note 3 to table on page 36.

This estimate of the Steel Corporation was submitted for the purpose of defending its huge capitalization, which was then directly challenged as one of the vital issues in the suit. As the legal right of the Corporation to carry out a proposed conversion of a portion of its preferred stock into bonds was dependent upon the amount of its assets there was a great inducement before the Corporation to overstate the value of its property in order to justify its capitalization. As shown later some of the Corporation's figures greatly exaggerated the true values.

The Bureau for the purposes of this third method of analysis has used the classification of property employed by the Corporation, shown in the preceding table. The basis of the Bureau's estimates by the different classes may now be briefly explained. For convenience in discussion the value of the ore property will be taken up last.

MANUFACTURING PROPERTIES.

For most of the subsidiary companies of the Steel Corporation the Bureau's valuations of the manufacturing plants were arrived at by deducting from the par value of the preferred stock issued at their respective organizations the amounts of working capital provided. The preferred stock, as already shown, in most cases represented the total assets acquired, which in several instances consisted exclusively of plants and working capital. Therefore the values of the plants could be arrived at by deducting the working capital from the amount of preferred stock. As the properties were acquired as going concerns, the preferred-stock issues probably included in some cases an allowance for intangible considerations, and this method may therefore somewhat overstate the value of the plants. This method was used in the case of the American Steel and Wire Company, the National Steel Company, the American Tin Plate Company, the American Steel Hoop Company, the National Tube Company, and the American Bridge Company. In the case of the National Steel Company, an addition of $2,561,000 was made on account of bonded indebtedness, which was considered as representing an equivalent investment in manufacturing properties. (Additional bonds were subsequently issued by this company, but almost entirely for other kinds of property.) A few of the other concerns had small amounts of indebtedness, bringing the total addition on this account up to $3,000,000. In the case of the American Sheet Steel Company, owing to evidence that even the preferred stock was heavily "watered," the value of the manufacturing plants was fixed at $12,000,000, although the preferred-stock issue was, roughly, $24,500,000. An addition of $1,000,000 was made to cover certain detached real estate. This company had $2,000,000 of bonded debt, but this has been considered as representing its natural-gas property. (See p. 26.)

The value given the plants of the Carnegie Company was the book value, as shown in the balance sheet of March 1, 1900. In the case of the Federal Steel Company, likewise, the value for its Illinois Steel Company plants was the book value at the time of their acquisition, while the value taken for its Lorain and Johnson companies' plants was practically the cash equivalent paid. The bond issues of these concerns, therefore, do not have to be considered.

The Shelby Steel Tube Company plants have been valued at $3,000,000.

The other constituent companies mentioned in the list on page 19 did not have any manufacturing plants.

The valuations thus arrived at are summarized in the following table:

BUREAU'S ESTIMATE OF INVESTMENT OF CONSTITUENT COMPANIES OF UNITED STATES STEEL CORPORATION IN MANUFACTURING PLANTS (INCLUDING BLAST FURNACES) AND REAL ESTATE AT THE DATES OF THEIR RESPECTIVE ORGANIZATIONS.

Company.	Preferred stock issued.	Current assets at organization.	Balance to represent plants.
American Steel and Wire Company	$40,000,000	$16,600,000	$23,400,000
National Steel Company [1]	27,000,000	9,000,000	18,000,000
American Tin Plate Company [1]	18,325,000	4,500,000	13,825,000
American Steel Hoop Company	14,000,000	3,000,000	11,000,000
National Tube Company	40,000,000	16,000,000	24,000,000
American Bridge Company [1]	31,374,000	11,500,000	19,874,000
Other companies:			
Carnegie Company (book value)			43,355,000
Federal Steel Company—			
Illinois Steel Company (book value)			20,200,000
Lorain and Johnson companies (approximate cash price)			4,000,000
Shelby Steel Tube Company (approximate cash price)			3,000,000
American Sheet Steel Company (estimated)			13,000,000
Add to cover investment in manufacturing plants represented by miscellaneous bonds			3,000,000
Total			196,654,000

[1] In the case of this company the preferred stock here given includes a small amount issued soon after the organization of the company.

This total of $196,654,000, it should be emphasized, is the indicated value of the manufacturing plants and accompanying real estate at the respective dates of organization of these constituent concerns (except in the cases of the American Bridge and Shelby Steel Tube companies), and not the value at the time of transfer to the Steel Corporation. As shown above, the aggregate surplus earnings of all the subsidiaries from the dates of their respective organizations to April 1, 1901, were approximately $117,700,000. A part of this was invested in manufacturing properties, and a portion of the original working capital of these concerns was also used for this same purpose. Just how much was invested in manufacturing plants is not definitely known. Large sums were invested in ore, coal, and transportation properties. On the other hand, there had very likely been some depreciation of these properties. From various data obtained the Bureau has concluded that an allowance of $250,000,000 would be sufficient to cover the total investment in these manufacturing properties on April 1, 1901. (Only a small addition had to be made on account of additional securities issued, because these were almost exclusively for other classes of property.)

That this allowance of $250,000,000 is sufficiently liberal is indicated by data furnished by the Steel Corporation. At the close of December, 1907, the Steel Corporation made an appraisal of its assets (see p. 44), in which the manufacturing properties (other than the Gary plant and those of the Tennessee Coal, Iron and Railroad Company) were valued at $367,600,000. This figure, according to the Corporation, represented the construction cost less accrued depreciation (see p. 41), except for real estate, which was taken at the current value. During the period from April 1, 1901, to December 31, 1907, there had been invested in net capital additions to these manufacturing properties (again excluding the Gary and Tennessee plants) approximately $114,500,000. Deducting this from the foregoing figure, gives an indicated investment in these manufacturing properties in April, 1901, of $253,000,000. This amount was over and above an expenditure of approximately $180,000,000 for ordinary maintenance and repairs which, in some cases, apparently included an allowance for depreciation although not so designated.

The Corporation's valuation of $367,600,000 at the end of 1907, however (and consequently the resulting figure of $253,000,000 for 1901), includes real estate at values in excess of those prevailing in 1901. Allowing for this fact, this 1907 appraisal of the Corporation does not indicate a valuation for the Corporation's plants in April, 1901, in excess of $250,000,000.

TRANSPORTATION PROPERTIES.

RAILROAD PROPERTIES.—The Bureau has placed the value of the railroad property of the Corporation at $70,000,000. This was almost exactly the book value—that is, the sum of the capital stock, bonds, and surplus. As shown in the detailed discussion in the body of the report, there can be little doubt that the Bureau's valuation is sufficiently liberal. This figure does not include an interest of, roughly, 48 per cent in the Pittsburg, Bessemer and Lake Erie Railroad Company not owned by the Corporation.

STEAMSHIP PROPERTIES.—The steamship property of the Corporation in 1901 has been valued by the Bureau at $20,000,000. This agrees almost exactly either with the cash prices paid by the Corporation, or with the net investment shown on the books of the constituent companies, either of which can not be regarded as understating the value. It is equivalent to an average of, roughly, $40 per ton of carrying capacity, including both barges and steamers. At the close of 1900 ore steamers of the most improved type could be constructed at an average cost of from $45 to $50 per ton of cargo capacity. The cost of barges was somewhat less. Since many of the vessels were more or less depreciated and somewhat obsolete in type, an average valuation of $40 per ton must be regarded as liberal. It is possibly excessive, but as any reduction which could reasonably be made would be comparatively small, it has been allowed.

DOCK PROPERTIES.—The only important dock property acquired by the Steel Corporation (other than certain docks included with railroads or manufacturing plants and embraced in the foregoing valuations for these) was that of the Pittsburg and Conneaut Dock Company, the book investment in which on April 1, 1901, was $1,236,375. An allowance of $1,500,000 for all miscellaneous dock property is undoubtedly sufficient.

On the foregoing basis, it will be seen, the total valuation for the transportation properties as a group is $91,500,000. It should be noted that this figure represents the entire value of these properties (except in the case of the Pittsburg, Bessemer and Lake Erie Railroad, as above noted), and not merely the equity value over and above bonded indebtedness.

COAL AND COKE PROPERTY.

The Steel Corporation's estimate of $100,000,000 for this property was undoubtedly excessive in some respects, particularly in the values assigned to coking-coal lands, a large portion of which was rated at $1,500 per acre. The Bureau has allowed $1,200 per acre for such coal, a figure which, in view of the facts set forth in the body of the report, must be regarded as entirely ample. This meant a reduction of $13,000,000; the steam coal estimate was reduced by $3,000,000. The Corporation's estimate, moreover, included additions made to the property since April 1, 1901, amounting to, roughly, $2,000,000. It also included an entry of $2,500,000 for certain property not acquired until the end of 1901. Allowing for these considerations, the Bureau has fixed upon $80,000,000 as an approximate but liberal valuation of this coke property in April, 1901.

NATURAL-GAS AND LIMESTONE PROPERTIES.

The Corporation, it will be seen, placed the value of the natural-gas property in 1901 at $20,000,000. Owing to the great difficulty of arriving at a conclusive estimate of the value of that property as it existed in 1901, the Bureau has allowed this valuation to stand. It may be pointed out, however, that this figure is about double the valuation of the Steel Corporation in 1907 for its natural-gas property at that date. The Corporation's natural-gas property was acquired chiefly through the Carnegie and American Sheet Steel companies.

The Corporation's allowance of $4,000,000 for the limestone property is undoubtedly excessive, but the amount is comparatively small and in the absence of satisfactory data the Bureau did not attempt to revise it.

WORKING ASSETS.

The working assets of $136,500,000 were arrived at from a consolidated balance sheet furnished by the Corporation. Purchase-money obligations and sundry real-estate mortgages were treated as bonded indebtedness. (See note 3 to the table on p. 36.) This total includes $25,003,000 cash capital provided for the Corporation at its organization.

SUMMARY FOR PROPERTY OTHER THAN ORE.

The Bureau's estimates of the tangible property of the Corporation, other than ore, in 1901, are therefore as follows:

Manufacturing, including blast furnaces	$250,000,000
Transportation	91,500,000
Coal and coke	80,000,000
Natural gas	20,000,000
Limestone	4,000,000
Working assets	136,500,000
Total	582,000,000

The total value assigned these classes of property in the Corporation's estimate of 1902 (see table on p. 21), it will be observed, was roughly $700,000,000, or, after including the bonded indebtedness of transportation properties and purchase-money obligations and mortgages, to make the two estimates fairly comparable, approximately $757,000,000. The Corporation's estimate, of course, included additions to property made from April 1, 1901, to July, 1902. Nevertheless the Corporation's estimate of its manufacturing properties was undoubtedly excessive. Except in this instance, the Bureau's valuations for these classes of property are not strikingly different from those of the Corporation in 1902.

VALUE OF THE ORE PROPERTY OF THE STEEL CORPORATION.

The ore valuation made by the Corporation, however, presents a very different question. The table on page 21 shows that the Corporation assigned a value of no less than $700,000,000 to its ore property, or almost one-half of the total claimed for all its assets. It is evident, therefore, that conclusions regarding the value of the ore must largely govern opinions as to the relationship between the capitalization and the actual property assets of the Steel Corporation as a whole.

The Bureau has estimated the value of this ore property by three different methods—first, on the basis of prices paid for ore in fee shortly before the Corporation was organized; second, on the basis of the price paid by the Steel Corporation itself for a certain portion of its ore property; and, third, by a calculation of the "present worth" of royalties on leased ore.

It should be explained that it is a very common practice for operators of iron mines to lease ore-bearing tracts on a system of rentals called "royalties"; that is, the lessee (or operator) contracts for the right to take ore from a given deposit and to pay the owner thereof a stipulated amount for every ton of ore taken out. Usually the lease provides that not less than a fixed minimum shall be paid for annually.

Such a right to mine ore is called a "leasehold." A mine which is owned outright by the operator is spoken of as a "fee" mine, and the ore in such a mine or in a tract of land so owned is spoken of as "fee ore."

VALUATION BASED ON PRICES FOR FEE ORE.—In arriving at a valuation by this first method, which the Bureau regards as the least conclusive of the three, an effort has been made to determine in a rough way the prevailing prices for fee ore in 1901. Allowance must then be made for the fact that a considerable part of the Corporation's ore, instead of being owned in fee, was simply held by it under lease. The value of such leasehold rights necessarily is less than the value of a corresponding quantity of similar fee ore.

Fee prices of ore, owing to the great uncertainties which attend all mining enterprises, should be used only with great discretion. The price originally paid for a mining property may not, of course, represent the real market value of that property at a later period after development. For this reason prices paid for ore property in the early nineties have not been taken into consideration by the Bureau. The prices paid by the constituent concerns of the Steel Corporation in the late nineties, however, are entitled to some weight, although even these must be regarded as simply in the nature of evidence and not as conclusive. All available evidence indicates that prices of ore bought in fee in the late nineties seldom amounted to more than a few cents per ton on the estimated tonnage acquired.

As one instance it may be noted that the American Steel and Wire Company bought the Sauntry mine in 1899 for $700,000. This mine was estimated at the time to contain anywhere from 25,000,000 to 40,000,000 tons of ore. On the lower estimate of tonnage the price was less than 3 cents per ton and on the higher basis less than 2 cents per ton. A later estimate, based on expert examination, placed the tonnage at over 80,000,000 tons, which would indicate a price of less than 1 cent per ton. The reported prices paid for several other mines transferred in fee in 1899 and 1900 likewise averaged only a very few cents per ton on the estimated tonnage.

The following significant statement from a formal brief filed by the delegation from St. Louis County in the House of Representatives of Minnesota (the great bulk of the developed iron-ore deposits of Minnesota being in St. Louis County) as late as 1909 may be cited:

> The cheapest sales of fee ore we ever knew were for less than 1 cent per ton; the highest that we ever knew were for 15 cents per ton. There may have been sales at a higher price, *but we have never known of one, and upon inquiry can learn of none.*[1]

This emphatic statement, made eight years after the Steel Corporation was organized, during which period there had been a considerable advance in the value of ore property, together with much additional evidence presented in the body of the report, clearly indicates that fee ore in the ground in the Lake region in 1901 was on the average worth decidedly less than 15 cents per ton.

An estimate of 700,000,000 tons for the total ore holding of the Steel Corporation in 1901 must be regarded as liberal. Indeed the Corporation in its estimate of 1902, above given (see p. 21), reckoned on this tonnage, its valuation of $700,000,000, being at the rate of $1 per ton. It has since been admitted that this estimate made no allowance for the fact that a large part of the ore was simply leased and not owned in fee. The allowance of $1 per ton for even the fee ore was unquestionably extravagant.

Supposing that all the ore had been owned in fee in 1901 (which was not the case), and allowing as much as 10 cents per ton as a fair average value, the total value of a deposit of 700,000,000 tons would have been $70,000,000; at an average of 5 cents per ton only $35,000,000. Adding $9,000,000 to cover improvements to this mining property in 1901, this being approximately the book investment in these improvements (shafts, stripping, equipment, buildings, etc.), the indicated valuation of the entire property, based upon such fee prices, would range from $44,000,000 to $79,000,000. Even allowing as much as 15 cents per ton for the ore, which figure, however, is discredited by the statement of the mining interests above quoted, the total indicated valuation of the property, including improvements, would be only $114,000,000. However, these results are all on the assumption that all the ore was owned in fee, whereas at least one-half of it was simply leased. As stated above, such leases were worth less per ton than fee ore. If a correction were made for this, the above amounts would be substantially reduced.

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[1] Italics by Bureau.

PRICES PAID FOR ORE PROPERTY BY THE STEEL CORPORATION ITSELF.—The most important single block of ore property acquired by the Steel Corporation in 1901 was that of the Lake Superior Consolidated Iron Mines. An official statement at the time of the purchase placed the holdings of that concern anywhere from a minimum of 300,000,000 tons to well above 400,000,000 tons; the higher estimate later proved to be conservative. Using the lower figure, it will be seen that the holdings of this concern represented three-sevenths of the total accepted estimate of 700,000,000 tons. The quality of the ore properties of this company as a whole was certainly equal to the average quality of all the ore properties acquired by the Steel Corporation. The proportion of the fee ore apparently was higher than for the other ore property of the Corporation. By determining a valuation for so large a fraction of the total, therefore, it is possible to arrive at an approximate value of the entire holdings of the Corporation.

The Steel Corporation acquired the Lake Superior Consolidated concern on the basis of $135 of its own preferred and $135 of its common stock for each $100 of the old stock. The total par value of Steel Corporation securities thus issued was roughly $79,400,000. The market value, based on the average prices of Steel Corporation stocks for the first year of the company's operations ($94 for the preferred and $44 for the common), was approximately $55,000,000. While this was substantially the cash price obtained by the owners, it undoubtedly far exceeded any price which the purchasers would have been willing to pay in actual cash. Indeed, the market prices of the securities issued for this concern almost certainly overstate the real cash value of the property. Such prices in securities, even when reduced to the basis of actual market value, undoubtedly include what is in effect a price paid to get greater control of the ore situation.

In addition to its ore property, the Lake Superior Consolidated Iron Mines owned the entire $2,512,000 capital stock and $2,305,000 of the bonds of the Duluth, Missabe and Northern Railway. This railroad was exceptionally valuable. Its average earnings in 1900 and 1901 were at the rate of over 50 per cent yearly upon the capital stock. Its operating expenses in 1900 were less than 45 per cent of the gross earnings. (See p. 60.) Moreover, the capital securities of this road appear to have been fairly well protected by tangible assets alone. Without allowing anything for earning power, therefore, the investment value of these railroad securities at par, plus $3,000,000 to cover the surplus on April 1, 1901, was, approximately, $7,817,000.

Applying the rates of exchange into United States Steel stock—$135 for the preferred and $135 for the common for each $100 of the Lake Superior Consolidated stock—to this figure, gives a total of, roughly, $10,553,000 of each class of stock which may be considered as having been issued for this railroad property. Deducting this from the total amounts of Steel Corporation stock issued for the entire property of the Lake Superior concern (roughly $39,708,000 of each class) there would be left $29,155,000 of each class for the ore property. The market value of this stock at the average prices above given ($94 for the preferred and $44 for the common) would be $40,234,000.

Using the minimum estimate of 300,000,000 tons, this price was equivalent to 13.4 cents per ton for the ore; using the estimate of 400,000,000 tons the average would be almost exactly 10 cents per ton. These prices, it should be noted, include fee mines, leaseholds, and improvements, collectively, and not merely fee ore. The proportion of fee ore in the Consolidated company's holdings, as just stated, was apparently higher than for the other ore property acquired by the Steel Corporation taken as a whole. The property, moreover, included a large number of improved mines.

Applying these averages to the accepted estimate of 700,000,000 tons as the total ore tonnage of the Steel Corporation in 1901, the total cost of the acquisitions of ore property (with improvements), had it all been acquired on the same average basis per ton (assuming the same proportions for fee and leasehold mines) as this ore of the Lake Superior Consolidated Iron Mines, would have ranged from about $70,000,000 to $94,000,000, according to the tonnage assumed for the Lake Superior Consolidated Iron concern.

Calculations thus based upon this Consolidated Iron Mines purchase must be regarded as liberal and probably excessive. The rates of exchange allowed the Consolidated stock are in themselves indicative of an excessive payment. These rates figure out an approximate cash yield of $186 for each share of the Consolidated Iron Mines stock, whereas down to the close of 1899 the highest price for the stock for many years appears to have been $60 per share, and the highest price down to the close of 1900, $75 per share. It is incredible that there could have been any such rapid increase (nearly 250 per cent) in actual market value in this short interval. The chief owners of the Lake Superior Consolidated stock were Standard Oil capitalists who were under no pressure to sell, and who must have recognized the strategic position which the ownership of this ore and railroad property gave them, and who certainly must have intended to name what they considered a high price. The organizers of the Steel Corporation on their side were naturally willing to pay an extremely liberal price for this extensive property, particularly in view of the important degree of monopolistic control over ore transportation which was thereby secured. As will be shown in a later part of the report, the profits of these ore railroads have been exceptionally high. Altogether, therefore, the above totals of from $70,000,000 to $94,000,000, or, at any rate, the latter figure, must be regarded as a very liberal indication of the value of the entire ore property of the Steel Corporation. A special reason for this view, moreover, is that this purchase apparently included a relatively larger proportion of fee ore than obtained in the case of the remainder of the Corporation's ore. For example, the important holdings of the Carnegie interests were almost entirely leaseholds.

VALUE OF STEEL CORPORATION'S FEE ORE PROPERTY IN 1901 AS INDICATED BY "PRESENT WORTH" OF ROYALTIES ON LEASED ORE.—The third method employed by the Bureau for estimating the value of the ore property of the Steel Corporation in 1901 is based upon a computation of the "present worth" of royalties on leased ore. As already stated, a very common method of acquiring iron-ore property is by lease, the lessee mining the ore and paying a stipulated sum per ton ("royalty") as each year's production is mined and shipped. The royalty therefore measures, roughly speaking, the cost or worth of the ore in the ground for that portion which is immediately mined. However, it is obvious that the present worth of the royalties for the output of a distant year is less than the value of the royalty for the same amount of production in the current year, first, because the lessor (i. e., the owner of the ore) does not receive payment therefor until a distant year, such payment having a present value determined by the principles of discount, and, second, because he is meanwhile exposed to various risks attendant on the progress of mining the ore, which tends of course to enhance the rate of discount. Therefore the owner would be willing to sell his mine at a sum considerably less than the aggregate of the royalty payments which he might expect to realize if he leased it over a long period of years. Similarly, the lessee, if he were to purchase the mine in fee instead of making a lease, would expect to pay very much less than the aggregate of such royalties. The exact price which he would be willing to pay probably would not be computed by this method. But it is reasonably certain that on the average such cash prices for ore in fee would be less than the present worth of the aggregate royalty payments, discounted at a reasonable rate of interest. A particular reason is that a fee purchaser must bear the risk of ownership, such as the failure to find as much ore as expected, the discovery of more valuable deposits by competitive interests, or other contingencies which might adversely affect the value of the lease, particularly the possibility that the ore might not be extracted as rapidly as anticipated. A further reason is that the provisions of iron-mining leases are in many respects liberal to the lessee, thus making him the more indisposed to purchase in fee, unless the price is low.

Such calculations of the present worth of royalty payments therefore are of great service as affording another means for determining the value of this ore property of the Corporation.

In making such a computation of present worth it is necessary to determine upon four factors, as follows:

I. The tonnage of the deposit.
II. The average rate of royalty.
III. The rate of discount (or interest).
IV. The estimated duration of the deposit.

Tonnage of the deposit.—The tonnage of the deposit controlled by the Corporation in 1901 may be accepted, as in the preceding calculations, at 700,000,000 tons.

Rate of royalty.—The rate of royalty can be taken at 28 cents, as this was the actual average for 17,000,000 tons of Lake ore in 1902 (1901 data not being secured). This represented the great bulk of the royalty ore output of the Lake district in that year. It may be noted that in addition to the royalties there frequently were "bonus" payments; these are considered later. (See p. 34.)

In recent years there has been a rather decided increase in rates of royalty on new leases in the Lake region. (See p. 48.) However, this increase, much of which is undoubtedly due to the great concentration of ore properties in a few hands, should not be taken account of in this discussion of values in 1901.

Rate of discount.—As to the rate of interest for figuring discount, it is obvious that in a mining enterprise, which always involves a large element of risk, the prospective purchaser would be disposed to discount the value at a rather high rate. The Bureau, however, in order not to underestimate the value of the ore property, has based its conclusions in the main upon a discount rate of 6 per cent. This may be too low a rate in view of the risks involved, but the total difference in the indicated value of a deposit of not over 700,000,000 tons arrived at by the use of this rate as compared with a considerably higher rate is not of great importance in relation to the enormous total of the Steel Corporation's capitalization. In the body of the report, however, the values are computed at several different rates.

Duration of deposit.—An exhaustion period for an ore body of 700,000,000 tons can be estimated from the actual production from 1901 to 1910. The production of the Steel Corporation's mines for the entire year 1901 (including the operations of the subsidiary companies for the period from January 1 to March 31) was, roughly, 13,000,000 tons, and for the five-year period ended with 1905 it aggregated about 73,000,000 tons. In the next five years it increased to 103,000,000 tons, and a further increase would naturally be expected. In view, however, of the fact that the production of the first 10 years was only about 176,000,000 tons, or a little over one-fourth of the estimated total of 700,000,000 tons, it seems improbable that the remaining three-fourths will be exhausted within an additional period of 20 years; that is, within a 30-year period from the organization of the Corporation. Calculations are shown in the body of the report, however, based upon periods of 25 years, 30 years, and 35 years.

For all practical purposes, in dealing with an estimated deposit of 700,000,000 tons, the rate of production during the exhaustion period may be regarded as uniform. A rough calculation by a more scientific method involving the construction of a probable "curve of production" is, however, given in the body of the report.

It must be remembered that this 700,000,000 tons was simply the total ore holdings in 1901, the date now under discussion. This figure, of course, does not include very considerable additional holdings acquired by the Corporation since 1901.

Indicated valuations of fee ore.—Assuming an exhaustion period of 30 years and taking the royalty at the actual going average of 28 cents, and discounting this royalty at 6 per cent interest, the indicated worth of this ore body of 700,000,000 tons in 1901, *if bought in fee*, is, roughly, $95,300,000. The Bureau has given chief weight to these factors. Assuming an exhaustion period of 35 years and a uniform rate of production, the indicated value would be about $86,000,000. If a higher rate of discount were used, these valuations would be reduced.

It should be noted that rather wide differences in the original factors assumed produce only moderate discrepancies in the final results. Moreover, the results arrived at by the combination of any credible set of factors indicate a valuation only a small fraction of that claimed by the Steel Corporation in its estimate of 1902. As shown later, the valuations obtained by this method work out in surprising agreement with those obtained by the two methods already used.

The valuation of $95,300,000, it will be seen, is equivalent to almost exactly 13.6 cents per ton for fee ore. When it is recalled that a delegation of mining interests in the Minnesota Legislature as late as 1909 stated that, so far as they had been able to ascertain, 15 cents was the highest price ever paid for ore in fee, it would appear that the average valuation here given is high, even as an expression of the going value of fee ore. Only a portion of the Steel Corporation's ore was owned in fee. Possibly not one-third, or even one-fourth, of the total estimated tonnage of 700,000,000 tons was thus owned in 1901. In order to insure a sufficiently liberal valuation of the ore property, however, the Bureau has made its computations on the assumption that one-half of the total amount was owned in fee. At an average valuation of 13.6 cents per ton the total indicated value of this portion of the

Corporation's ore property would be approximately $47,600,000. While this figure is probably high, the Bureau has also allowed for the fact that bonus payments might be obtainable in the event of a transfer of these holdings under lease at an average royalty of 28 cents. This addition is stated below.

Transfer value of leases.—The value of the leases as distinct from that of the ore—that is, of the privilege of mining ore at stipulated royalties—may be considered as measured approximately by the bonus payments which such leases would command if transferred. Broadly speaking, the bonus is the amount paid for the purchase of a leasehold with its improvements. The actual average bonus payments on 23 leases made during the period 1900–1902, as reported to the Bureau by Dwight E. Woodbridge, a mining engineer of Duluth, were almost exactly 3 cents per ton. It is possible that this would be a sufficiently liberal allowance to apply to the entire 350,000,000 tons of the Steel Corporation's ore assumed to have been held under lease. It might, however, be argued that the leases of the Steel Corporation under the stipulated royalties, had they been on the market in 1901, would have commanded a rather higher average bonus. The Bureau, therefore, in order to fix upon a value which can not be challenged on the ground of undervaluation has allowed an average of 6 cents per ton, or double the average for the 23 mines above referred to. This average of 6 cents, applied to the assumed leasehold tonnage of 350,000,000 tons, gives a total of $21,000,000.

This covers the bonus value of the leased ore. It should be noted here that in using, for this calculation of fee-ore values, the average going royalty of 28 cents per ton, nothing has been allowed for the possibility that had all the *fee ore* of the Corporation been available for lease in 1901 it might also have commanded a bonus over that rate, which of course was largely governed by royalties on old leases. However, the royalties prevailing in 1901 do not appear to have been greatly in excess of those of earlier years. One reason for this may have been that the State of Minnesota was then leasing considerable tracts of State ore lands at a uniform royalty of 25 cents per ton. Still again, part of the fee ore owned by the Steel Corporation was of low grade, so that it is exceedingly doubtful whether it could have been leased at more than the current average rate of 28 cents per ton used in the preceding calculation. However, the Bureau has also made an addition of 6 cents per ton, or $21,000,000, to the value of the fee ore as above computed, this increase being equivalent to the average value of bonuses applied to leased ore. It is certain that this valuation for the fee ore is excessive. It gives the fee ore a value of 19.6 cents per ton, whereas the maximum price paid for such ore as late as 1909, according to competent authorities, was reported at 15 cents per ton.

INDICATED TOTAL VALUATION BY DISCOUNT METHOD.—The total indicated valuation of the entire deposit of 700,000,000 tons by this discount or "present-worth" method therefore amounts to $89,600,000, as follows:

1. $47,600,000, for the value of the fee ore based upon the average going royalty in 1901, without any allowance for bonus.
2. $21,000,000, to cover the possible bonus value of such fee ore over and above the preceding valuation, had it been available for lease in that year.
3. $21,000,000, for the transfer or bonus value of the leaseholds themselves.

It is probable that this valuation of $89,600,000 is sufficiently liberal. While no specific amount has been allotted in this estimate for improvements to mining property, the bonus additions, aggregating for the fee and leased ore together no less than $42,000,000, undoubtedly include a very substantial amount for such improvements. The actual book value of the improvements to the Steel Corporation's mining property in 1901, it will be recalled, was about $9,000,000. To add this sum to the preceding total of $89,600,000, would undoubtedly result in duplication. However, it is possible that the bonus calculations may not be sufficient to cover all of the improvements to mining property. The Bureau has allowed for this in its final estimate.

SUMMARY OF ORE VALUATIONS.—Comparing the Bureau's estimates of this ore property by the several methods described, it will be seen, first, that the current prices of fee ore indicate that the fee properties and leaseholds of the United States Steel Corporation were worth much less than $90,000,000; second, that the terms of the purchase of the Lake Superior Consolidated Iron Mines indicate a total value for all the ore property of the United States Steel Corporation in 1901 of not over $70,000,000 to $94,000,000; and, third, that the valuation based on present worth of royalties and bonus values of leases indicates that the same property was worth about $90,000,000.

Altogether there can be no doubt that an estimate of from $90,000,000 to $95,000,000 as the value of this ore property would be sufficiently high. Taking all the facts into consideration, however, the Bureau concluded to allow a round value of $100,000,000 for the ore property in 1901.

It is worth calling passing attention to the fact that in the year 1902 the total valuations, as assessed for taxation, of all iron-mining properties in the States of Minnesota and Michigan, of which at that time the United States Steel Corporation probably owned not much over one-half, was only about $54,000,000. Practically all the Corporation's ore holdings were then in these two States. In other words, the Corporation's ore property, which, for taxation, was probably assessed at considerably less than $40,000,000, was, for the purpose of justifying its capitalization, valued at $700,000,000. Of course, it is not intended to say that the tax valuations represented the full value of the property.

SUMMARY OF BUREAU'S VALUATIONS BY DEPARTMENTS OF THE BUSINESS.

The valuations for the different classes of the property of the Corporation in 1901, arrived at by the Bureau by this third method, are in the following table summarized and compared with those of the Corporation in 1902, as already given on page 21.

VALUE OF TANGIBLE ASSETS ACQUIRED BY STEEL CORPORATION IN 1901, AS COMPUTED BY BUREAU, COMPARED WITH ESTIMATE OF CORPORATION SUBMITTED IN THE HODGE SUIT IN JULY, 1902.

Class of property.	Bureau's estimate of tangible values in 1901.	Corporation's estimate of tangible values in 1902.	Difference.[1]
Ore property	$100,000,000	$700,000,000	$600,000,000
Manufacturing plants, including blast furnaces	250,000,000	348,000,000	98,000,000
Railroad, steamship, and dock property	91,500,000	[2] 120,340,000	28,840,000
Coal and coke property	80,000,000	100,000,000	20,000,000
Natural-gas property	20,000,000	20,000,000	....
Limestone properties	4,000,000	4,000,000	....
Cash and cash assets	136,500,000	[3] 164,660,000	28,160,000
Total	682,000,000	1,457,000,000	775,000,000

[1] A part of the differences between the two estimates is accounted for through additions made to property during the interval from April 1, 1901, to July 1, 1902, such additions, of course, being included in the Corporation's figures.

[2] This figure includes $40,340,000 of indebtedness which was not included in the estimate of the Corporation, this addition being made in order to render the estimates comparable.

[3] In arriving at this figure purchase-money obligations and real-estate mortgages of $16,369,000, which were deducted by the Corporation (see table on p. 21), were restored by the Bureau to make the amounts comparable.

The total valuation of $682,000,000, it will be seen, is less than one-half the value claimed by the Corporation in 1902. Nevertheless, in every case the valuations of the Bureau are believed to be liberal. As already noted, the estimates of the Corporation include additions to the property up to July 1, 1902. Such additions, however, would explain only an insignificant part of the discrepancy, and, in the case of the ore, are entirely negligible.

It may be repeated that the Bureau's figures do not allow for any additional value which may have been imparted to these properties by the mere act of consolidation. A large part of any such addition is properly excluded from consideration, as it must have been due in a measure to concentration of ownership and control or the restriction of competition. While the merger of such properties, particularly on account of greater integration, might have imparted a considerable value to them as going concerns over and above the aggregate of the valuations prior to consolidation, it is impossible to separate any such increase in value, due to coordination and integration, from the increase due to the elimination of competition, and therefore no quantitative statement of such additional value has been attempted by the Bureau.

COMPARISON OF VALUATIONS OF STEEL CORPORATION'S PROPERTY IN 1901 WITH ITS CAPITALIZATION.

The Bureau's valuations of the Steel Corporation's property in 1901, arrived at by these different methods, may now be compared with its outstanding capitalization at that time. This is done in the following table:

COMPARISON OF ESTIMATES OF VALUE OF PROPERTY OF UNITED STATES STEEL CORPORATION AT ITS ORGANIZATION IN 1901, WITH PAR VALUE OF ITS SECURITIES.

		Excess of securities over estimates.
Total capitalization in April, 1901, including underlying bonds and purchase-money obligations	[1]$1,402,846,817	
Investment in tangible property alone, indicated by historical analysis	676,000,000	$726,846,817
Value of all property, tangible and intangible, as indicated by market prices of securities of constituent concerns	793,000,000	609,846,817
Value of tangible property as estimated by departments of the business	682,000,000	720,846,817

[1] Excluding $535,407 unacquired stock in constituent concerns for which no corresponding deduction was made in the first and third estimates.

It will be seen at once that the securities issued by the Steel Corporation very greatly exceeded the indicated value of the property acquired, as established by any one of the three methods of valuation. The valuation of the tangible property arrived at by historical study, as well as that by departments of the business, shows an excess of capitalization greater than the indicated value itself. The valuation by departments, namely, $682,000,000, shows an excess of nearly $721,000,000. Even taking the indicated market value of the securities of the subsidiary concerns, namely, $793,000,000, which valuation includes the public estimate for intangible considerations as well as physical property, the excess of the Steel Corporation's capitalization was still over $609,000,000. Naturally the valuation arrived at by this method exceeded those obtained in the other two cases.

The Bureau does not contend that the capitalization of the Steel Corporation should have been fixed at any one of the three valuations here presented. All that is attempted at the moment is to present a comparison of these valuations with the capitalization. The figures show clearly that the entire issue of approximately $508,000,000 of common stock of the Steel Corporation in 1901 had no physical property back of it, and also a considerable fraction, say from one-fifth to two-fifths, of the preferred stock was likewise unprotected by physical property. Even granting that there may have been a considerable value in intangible considerations, it is reasonably clear that at least the entire issue of common stock, except in so far as what may be termed "merger value" may be considered, represented nothing but "water."

While, therefore, it is not the purpose of this report to say what should have been the capitalization of the Steel Corporation, it is obvious that the company was heavily overcapitalized, judged by any reasonable standard.

OVERCAPITALIZATION INDICATED BY ENORMOUS COMMISSION TO UNDERWRITING SYNDICATE.

Very convincing evidence of a ruling tendency toward excessive capitalization is afforded by the enormous payment the Steel Corporation allowed its underwriting syndicate. This syndicate, as shown elsewhere, provided the Corporation with $25,000,000 of cash capital and also incurred expenses of about $3,000,000 either in buying scattered parcels of stock or otherwise, making its total cash expenditure $28,000,000. For this cash consideration, plus its underwriting services, the syndicate received from the Steel Corporation the enormous total of practically 1,300,000 shares of its stock (half preferred and half common) of an aggregate par value of practically $130,000,000. This stock appears to have realized approximately $90,500,000 (counting $4,000,000 unsold preferred stock at par), leaving as profit to the syndicate, over and above the $28,000,000 cash expenditure noted, a net sum of about $62,500,000. Of this, one-fifth, or $12,500,000, went to the syndicate managers for their services as such, the remaining $50,000,000 being distributed to the syndicate members.

There can be no question that this huge compensation to the syndicate was greatly in excess of a reasonable payment. For the $28,000,000 cash consideration the syndicate was properly to be reimbursed, and furthermore was entitled to additional compensation for raising that amount. Moreover, the syndicate was entitled to some compensation for its other services. Clearly, however, these services can not be considered as worth the huge sum actually allowed. The syndicate was under no obligation whatever to see the organization of the Steel Corporation through, but, on the contrary, the syndicate managers expressly reserved the right at any time in their own discretion wholly to abandon the transaction. The risk of the syndicate over and above the $28,000,000 cash consideration, therefore, can not be considered great. It is true that the nominal liability of the syndicate was $200,000,000, but it was generally understood at the time that only $25,000,000 in cash would be called from syndicate members, and this was the full amount actually called. Moreover, the syndicate was obligated to provide only $25,000,000 cash capital (aside from certain expenses) to the Steel Corporation, and the fact that the nominal liability of the syndicate was $200,000,000 could not increase this cash obligation to the Corporation, but was simply an arrangement between the syndicate managers and the syndicate members.

It should be pointed out that the syndicate managers were prominently identified with the management of several of the companies acquired by the Steel Corporation, and also with the management of the Corporation itself. Three partners of the firm of J. P. Morgan & Co., the syndicate managers, were on the directorate of the Corporation, and one of them was also chairman of the finance committee. Moreover, the underwriting syndicate included the heads of several constituent companies. These facts are entitled to great weight in connection with this enormous commission allowed to the syndicate. In other words, as managers of the Steel Corporation these various interests virtually determined their compensation as underwriters.

This extravagant compensation to the underwriting syndicate may fairly be cited as further evidence of a general disposition toward excessive issue of securities.

This huge commission, it should be noted, followed very liberal commissions allowed at earlier dates to the promoters of several of the various constituent companies. Assuming that of the total of, roughly, $65,000,000 par value each of preferred and common stock allowed the Steel Corporation underwriting syndicate, $28,000,000 of each class (a common basis of compensation in such cases) was for the cash consideration noted, there would be left as a commission alone $37,000,000 par value of each class, or a total of $74,000,000 par value. Adding to this the amounts allowed for similar commissions in the case of constituent companies at the dates of their respective organizations, and taking into account that the stock so issued by constituent companies received the same terms of exchange from the Steel Corporation as other stock of the same class, it would appear that of the Steel Corporation's stock in 1901 at least $150,000,000 (this including over $40,000,000 of the preferred) was issued either directly or indirectly for such promotion or underwriting services, this being over and above the enormous amounts of common stock issued as a bonus for property and for cash.

ADDITIONS TO PROPERTY OF THE STEEL CORPORATION SINCE 1901.

Since 1901 the Steel Corporation has greatly increased its investment. This increase has come about in two ways—first, and most important, through new construction and additions by the investment of surplus earnings and new capital derived from the sale of securities; and, second, through the acquisition of competing concerns through issue of securities directly therefor.

The capital additions to fixed property, by classes, are stated annually in the published reports of the Corporation, except for those made through the acquisition of the Union Steel Company in 1902, the Clairton Steel Company in 1904, and the Tennessee Coal, Iron and Railroad Company in 1907. All three of these properties were acquired substantially through the issue or assumption of bonds, and the actual investment of the Steel Corporation therein has been taken as the par value of such bonds (with the exception of a small amount of such bonds purchased by the Steel Corporation in the open market at less than par, and used in part payment for the Clairton and Tennessee concerns). This investment may differ from a fair value of these acquisitions, but for the present purpose this need not be considered.

By combining the net additions to fixed property made through direct expenditure and through such acquisitions, with the increase in the current assets, and adding these amounts to the original value in 1901, as computed by the Bureau (which has been considered as the Corporation's investment at that time), the total investment of the Corporation at the close of 1910 may be determined. Such total investment, it is true, may not represent the actual value of the tangible property of the Steel Corporation on that date, particularly on account of appreciation in the value of natural resources, including real estate. The rise in value of property of the Corporation between 1901 and the close of 1910, however, would necessarily have to take account of the great concentration of control of the industry enjoyed by the Steel Corporation, particularly with respect to the ownership of ore. This is a factor that can not be measured here.

Therefore, the Corporation's *investment* in its properties, rather than the *valuation* of these properties, is the proper basis for the current discussion, as well as for computing profits taken up later.

The following table shows the additions to the investment of the Steel Corporation from 1901 to 1910, together with certain deductions for depreciation which were considered by the Bureau as proper:

NET ADDITIONS TO INVESTMENT OF STEEL CORPORATION, APRIL 1, 1901, TO DECEMBER 31, 1910.

Description.	Total additions.	Estimated true depreciation.	Amount made good by expenditures not capitalized.	Net outstanding depreciation to be deducted from investment.	Net additions to investment.
Fixed property (exclusive of Gary and Tennessee Coal, Iron and Railroad Company):					
Manufacturing	$151,480,449	$107,060,053	$88,918,509	$18,141,544	$133,338,905
Iron ore	62,093,931	30,293,497	2,345,016	27,948,481	34,145,450
Coal and coke	34,112,303	21,220,986	5,534,665	15,686,321	18,425,982
Transportation	74,541,029	37,336,955	13,462,331	23,874,624	50,666,405
Miscellaneous fixed property	5,548,556	4,242,626	1,435,082	2,807,544	2,741,012
Other assets:					
Deferred charges	13,243,678				13,243,678
Investments	2,128,364				2,128,364
Sinking funds	16,067,666				16,067,666
Current assets	101,683,544				101,683,544
Total	460,899,520	200,154,117	111,695,603	88,458,514	372,441,006
Gary plant [1]	69,978,695				69,978,695
Tennessee Coal, Iron and R.R. Co.[2]	60,468,518	2,856,003	1,832,843	1,023,160	59,445,358
Add property adjustments	3,063,594				3,063,594
Grand total	594,410,327	[3] 203,010,120	113,528,446	[3] 89,481,674	504,928,653

[1] Includes city of Gary and railroad property. The figure is the construction cost. Depreciation of this plant is included in the figures given above. (See note 1, Table 38, p. 310.)

[2] Original cost of fixed property plus subsequent additions.

[3] Excluding an item of $385,181 which could not be distributed.

The figures of true depreciation given in this table represent the entire estimated depreciation in the properties of the Corporation, including exhaustion and obsolescence. The bulk of such physical depreciation was made good by expenditures on these properties which were not capitalized, thus leaving a balance which may be termed a "net accrued" or "outstanding" physical depreciation not made good, which balance has been set against the additions in order to arrive at the net additions to the investment.

In the case of the manufacturing properties the total allowance for estimated true depreciation is equivalent to rather less than 4 per cent yearly on the average investment in these (excluding land). This might at first sight seem too small. However, there was also expended during this period no less than $180,000,000 (1901 figures estimated) in so-called ordinary maintenance and repairs, which items apparently go far toward maintaining these properties in a high state of efficiency. The sum of these provisions for repairs, maintenance, and depreciation is equivalent to about 10 per cent yearly upon the average investment in these properties, again excluding land. These provisions taken together appear to be sufficient.[1]

The allowance for depreciation of ore property, $30,293,497, is equivalent to about 17 cents per ton on the actual production. A part

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pages 304-306.

of this represents depreciation of improvements, and a small part is for exhaustion of timber on ore lands. The greater part of this allowance, however, is for exhaustion of the ore. It seems rather high, especially in view of the fact that the bulk of the production was from leaseholds and not from fee mines, but the Bureau has allowed it to stand for the purposes of the present discussion because of the great difficulty involved in making a satisfactory division, and the relatively small importance which any changes so made would have in the final computation of either investment or of profits.

The total of $21,220,986 for depreciation of coal and coke property allows about 10 cents per ton as exhaustion proper of high-grade coking coal distinct from exhaustion of other coal and depreciation of coke-oven property and mine improvements.

The depreciation allowed for the transportation property, chiefly on railroads, seems high in view of the liberal expenditures for ordinary maintenance, but the Bureau has accepted it. The amount as given includes an allowance of, roughly, $6,700,000 for obsolescence, as distinct from actual depreciation, made on the theory that when the ore along the line of these railroads is exhausted the railroad property itself will lose the great bulk of its value. The provisions in the case of the steamship, dock, and miscellaneous properties appear reasonable.

In all cases the expenditures for ordinary maintenance and repairs have been large. Such expenditures for all classes of property for the period from 1902 to 1910 aggregated $245,271,000 (1901 figures never having been compiled).

Having determined upon an estimate of the true total depreciation for the purpose of computing the investment, the Bureau has, therefore, in the table on page 41, deducted from the investment those portions of the depreciation or the net accrued depreciation which had not actually been made good by expenditures upon the respective properties.

While, therefore, the total allowances for depreciation for certain classes of property appear somewhat excessive, the Bureau, after analysis, has for the purpose of computing the investment accepted these estimates as the actual depreciation of the Corporation's physical properties. They differ somewhat from the provisional allowances as stated in the annual reports. These provisional allowances in a few cases were admittedly excessive or included amounts not representing actual depreciation. Such excessive provisions have been excluded by the Bureau and also restored to the earnings (see p. 53). The total depreciation allowances given in the table include provisions for blast-furnace relining, which in the annual reports are not included under the provisional depreciation allowances.

The constituent companies of the Corporation very properly compute their depreciation charges (including exhaustion) on the original cost of, or investment in, the various properties and not on the replacement cost (either actually incurred or anticipated).

In addition to the provisions for depreciation above described, the Steel Corporation writes off its property account each year other varying sums, usually of large amount. These further sums, however, as explained by the Corporation to the Bureau, do not represent true depreciation based on original cost or purchase value of the physical property to subsidiary concerns, but are instead an offset of a part of the inflated valuations at which the stocks of the subsidiary companies are carried on the books of the Steel Corporation. Such additional amounts written off by the Steel Corporation itself, on account of over capitalization, while probably entirely justified from that standpoint, have, however, no relation to the real depreciation of such first cost of the physical properties, and consequently have not been deducted from earnings by the Bureau.

The treatment of these various depreciation charges is fully explained in the body of the report.

INDICATED INVESTMENT IN THE PROPERTY OF THE STEEL CORPORATION AT THE CLOSE OF 1907 COMPARED WITH APPRAISAL MADE BY CORPORATION AT THAT DATE.

By combining the net additions to the property of the Corporation from 1901 to 1910, as stated in the preceding table, with its investment in 1901 the investment at the close of 1910 is obtained. Before doing this, however, it is desirable to make an intermediate comparison of the total investment at the close of 1907 with an appraisal of the various properties of the constituent concerns which was made at that date by the Corporation itself.

This appraisal of the Steel Corporation at the close of 1907 is in the following table compared with the indicated *investment* in the property at that date, as computed by the Bureau by adding to the values determined upon by the Bureau for April, 1901 (see table on p. 36), the net additions down to the close of 1907, computed in the manner already indicated in the table on page 41.

BUREAU'S ESTIMATE OF INVESTMENT IN PROPERTY OF STEEL CORPORATION AT CLOSE OF 1907 COMPARED WITH CORPORATION'S ESTIMATE OF VALUE AT THAT TIME.

Description.	Investment as computed by Bureau.	Value as estimated by Corporation.	Difference.
Fixed property (exclusive of Gary and Tennessee Coal, Iron and Railroad Company):			
Manufacturing	$364,441,140	$367,632,230	$3,191,090
Iron ore and timber	119,879,749	[1]641,242,880	521,363,131
Coal and coke	95,557,205	142,521,913	46,964,708
Transportation	127,013,555	145,048,041	18,034,486
Miscellaneous fixed property	26,236,798	19,619,052	[2] *6,617,746*
Other assets:			
Deferred charges	6,204,734		[3] *6,204,734*
Investments	1,717,120		[3] *1,717,120*
Sinking funds	32,442,402	32,442,402	
Current assets	229,347,483	229,347,483	
Total	1,002,840,186	1,577,854,001	575,013,815
Gary plant [4]	24,063,388	24,063,388	
Tennessee Coal, Iron and Railroad Company	49,842,295	49,747,753	[5] *94,542*
Sundry adjustments	2,017,733		[3] *2,017,733*
Grand total	1,078,763,602	1,651,665,142	572,901,540

[1] Includes about $5,700,000 of timber property.

[2] This excess of the Bureau's figure over that of the Corporation is chiefly due to the fact that in computing the investment in 1901 the Bureau allowed a very liberal valuation. The Corporation contends that its 1907 appraisal of these properties was very conservative.

[3] Excess over Corporation's estimate, which did not include these items specifically, but which, however, allows for most of them in other items.

[4] Includes city of Gary and railroad property.

[5] Excess over Corporation's estimate.

The Corporation's valuation of the manufacturing properties was made in great detail and it is claimed that, apart from the real estate of these plants, which was separately itemized, the figures were for the construction cost. They agree substantially with those of the Bureau.

The Corporation's appraisal value of the transportation properties considerably exceeds the investment figure of the Bureau.

The excess of the Corporation's figure for coal and coke over that of the Bureau is chiefly due to the fact that it represents a current valuation, whereas the Bureau's figure is the valuation in 1901 plus the actual cost of subsequent investment, without allowing for any appreciation during this interval. Undoubtedly there had been some appreciation in the coal property during the period 1901–1907. This must be attributed in part to the fact that the great bulk of the Connellsville coking coal lands was owned by the Steel Corporation.

The figure used for the Gary plant is the Corporation's figure of construction cost.

The fixed property of the Tennessee Coal, Iron and Railroad Company has been entered by the Bureau at its cost in bonds issued by the Steel Corporation and underlying bonds assumed (subsequent additions also being included). The price paid for the stock as measured by the market value of the bonds so issued was equivalent to about the par value of the Tennessee company's stock, or roughly, $30,000,000 over and above bonded debt. The value of the property represented by this stock is difficult to estimate. For two years prior to the sale the average price of the stock on the New York Stock Exchange was about $146 per share. The stock, however, was a notoriously speculative security so that the market quotations are an uncertain guide. A consolidated balance sheet of the company of October 31, 1907, or just before the transfer of the company to the United States Steel Corporation, showed a surplus of $1,199,823, thus making the book value of the stock about $104. The fixed property in this balance sheet was carried at $44,988,699, which amount was at once written down by the Steel Corporation to $44,037,140, this placing the plants at $15,382,234, the mineral lands and certain real estate at $26,525,144 (except for an interest in the Potter Ore Company carried at $398,000), the balance representing miscellaneous real estate and railroad property. There is reason to believe that the plants were considerably overvalued. The book valuation of its mineral properties appears to have been liberal. Although these were enormous in extent, the market value was very low as compared with northern coal or Lake Superior ore, first on account of the low grade and second because of the great abundance of such raw materials in that region as compared with the market demand therefor.

Altogether it is doubtful whether the tangible property (including working assets) after allowing for bonds exceeded the par of the stock. However, the property probably had a potential value in excess of these assets, which value presumably was taken account of by the Steel Corporation. While the removal of competition may have influenced the price, still, taking all the property into consideration, the Bureau has deemed it reasonable to enter it at the actual cost.

Therefore, as in the case of the Corporation's estimate of 1902, the principal difference between its figures and those of the Bureau in this comparison for 1907 occurs in the item of iron ore. Here the valuation claimed by the Corporation is, roughly, $641,000,000, whereas the indicated investment in this property, as determined by the Bureau, is only $120,000,000. As repeatedly pointed out, the Bureau's figure of investment in this ore property is not an expression of the actual value of that property at the close of 1907. The Bureau has not attempted a valuation of the ore property at that time. A very large proportion of the available ore of the Lake Superior region had passed into the hands of a very few concerns, and especially into the hands of the Steel Corporation itself. Unquestionably this great concentration of ownership and control had much to do with whatever appreciation in ore values may have taken place since 1901. Even if a fair market value of the ore property in 1907 were established, it would so largely reflect the influence of this concentration of ownership as to be unsatisfactory for the purpose of this discussion. It would be practically impossible to measure and thus to segregate the appreciation in ore valuations which has come about solely from the concentration of ownership, from that which might have occurred under more competitive conditions. Therefore, instead of attempting to value this ore property, the Bureau has simply presented a statement of the aggregate actual investment.

While, however, the Bureau has not attempted to make a definite valuation of the ore property of the Steel Corporation at the close of 1907, it should be pointed out that the value of $641,000,000 claimed by the Steel Corporation is greatly excessive. Of this, roughly, $607,000,000 was for ore (fee properties and leaseholds)—as distinct from improvements—covering a tonnage of approximately 1,182,000,000 tons, or an average of 51 cents per ton. Convincing evidence that this valuation is excessive is shown by the actual cost of additions to the ore property since 1901. The total capital expenditures upon ore property by the Corporation from April 1, 1901, to the close of 1907 before deducting depreciation were $38,600,000. Of this total, approximately $19,000,000 represents the amount expended for ore, including fee and leasehold properties collectively. The total additions to the ore reserves of the Corporation by this expenditure (again taking leaseholds and fee properties collectively) were certainly several hundred million tons; this not including the "Hill" ore, which the Steel Corporation itself did not include as an asset in its appraisal (except for certain expenditures for development work and advanced royalties). The exact amount added can not be stated because large additions to the estimated total have been made by proving up ore land owned in 1901.

It is worth noting, incidentally, that this valuation of, roughly, 51 cents per ton at the close of 1907 compares with a valuation in the Hodge suit in 1902 of $1 per ton. Since there had been some appreciation in ore values during this interval, the 1902 estimate, it will be seen, is very thoroughly discredited by the Corporation's own figures of 1907.

Therefore the average cost per ton of the ore acquired since 1901, again taking fee and leaseholds collectively, was only a few cents, whereas, as just shown, the total value claimed by the Steel Corporation indicated an average of over 50 cents a ton. While the original cost of a mining property is not a reliable indication of its value subsequently, it is impossible to accept an average valuation of as much as 50 cents per ton for the ore of the Steel Corporation, in view of the low actual cost of the enormous quantity acquired during this period. There is no satisfactory explanation why ore, which, for purposes of purchase from outside concerns, is worth only a few cents per ton suddenly becomes worth 50 cents by the mere act of transfer to the United States Steel Corporation. Therefore the inevitable conclusion is that the Steel Corporation's appraisal of 1907, just as its estimate in the Hodge suit in 1902, placed an extravagant valuation upon its ore property.

It should be pointed out that the bulk of the Steel Corporation's ore property in 1907 consisted of leaseholds and not ore in fee. For the mining of ore from such leaseholds, the Corporation must, of course, pay a royalty. In other words, for the greater part of its ore property the Steel Corporation merely had an equity interest in the ore. It is inconceivable that this equity, together with the value of the ore owned in fee, could have been anything like the total valuation claimed by the Steel Corporation in its foregoing appraisal, although this equity in old leases had increased somewhat during this period, owing to some advance in the average rates of royalty on new leases.

Great Northern ore lease.—As noted above the Corporation in its valuation of its property in 1907, did not enter anything for the value of the Great Northern or "Hill" ore lease. This lease, on account of the royalties provided therein, has often been referred to as an indication of the increased value of Lake ore.

The Great Northern Railway interests, which had acquired control of immense tonnages of ore by purchase or lease for the protection of the traffic of their railroad, transferred the larger part of these holdings by lease to the Steel Corporation at the beginning of 1907. Under this lease the Steel Corporation agreed to mine the ore and ship it over the Great Northern Railway and, substantially, to pay, for the year 1907, a royalty at the rate of 85 cents per ton on dried ore containing 59 per cent iron. In each successive year the royalty was to be increased by 3.4 cents per ton. For ores richer or leaner in iron a sliding scale of royalties was provided which was also subject to the same yearly additions of 3.4 cents. Very high minimum tonnages were also agreed upon, increasing from 750,000 tons in 1907 to 8,250,000 tons in 1917, after which a fixed minimum of 8,250,000 tons was stipulated. It was provided that the Steel Corporation might cancel the lease January 1, 1915, on giving 2 years' notice.

While the average royalty which will actually be payable under this lease will depend on the quality of the ore shipped, the indications from the royalties paid on shipments up to 1910, inclusive, are that the average iron content has not fallen very much below the 59 per cent grade of ore.

A royalty of 85 cents with annual increases of 3.4 cents is absolutely unprecedented in the Lake ore trade. It is true that one or two leases have been made for small and exceptionally valuable ore deposits with fixed royalties of $1 per ton. The royalties, however, on all new leases, other than the Hill lease, which the Steel Corporation has made from the beginning of 1907 to the present time apparently will not average over 40 cents per ton. Moreover, there is no indication that either the average quality of the ore on the Hill lease or the costs of mining it justify the payment of exceptionally high royalties. The royalties stipulated in the Hill lease, therefore, were and are still far above the market value.

The only reasonable explanation of this extraordinary transaction is that the Steel Corporation desired to prevent this ore either from being mined and sold to independent producers, thus possibly depressing the price of ore, or from being utilized by the Hill interests to build up a new and dangerous competitor in the iron and steel business, thus depressing the market prices of iron and steel products. The Steel Corporation was the only concern in the iron and steel business which was strong enough financially and which had a sufficiently large productive capacity even to consider the taking over of such a large quantity of ore at such a high royalty.

The Steel Corporation expressly disclaims any intention to head off competition by this lease, and asserts that it merely desired to strengthen its ore reserves. Whatever the motive for this transaction, its practical effect was to forestall competition as well as to increase the Corporation's control of the ore resources of the country. As the rate of royalty agreed on was greatly in excess of current market rates on ordinary transactions, it is not surprising that the Corporation made no claim to an increase of its assets on account of this lease.

The high royalty named in this lease, therefore, instead of being indicative of a marked enhancement in ore values, is rather evidence of the extent to which the Steel Corporation was willing to go in order to prevent this ore from falling into the hands of rival interests.

INVESTMENT OF STEEL CORPORATION AT THE CLOSE OF 1910.

The Steel Corporation has made no detailed appraisal of its properties since the close of 1907. The Bureau's computation of the investment in the Corporation's property down to the close of 1910 is given in the following table:

INVESTMENT IN TANGIBLE PROPERTY OF STEEL CORPORATION ON DECEMBER 31, 1910, AS COMPUTED BY BUREAU.

Description.	Investment 1901.	Net additions 1901–1910.[1]	Total investment Dec. 31, 1910.
Fixed property (exclusive of Gary and Tennessee Coal, Iron and Railroad Company):			
Manufacturing	$250,000,000	$133,338,905	$383,338,905
Iron ore	100,000,000	34,145,450	134,145,450
Coal and coke	80,000,000	18,425,982	98,425,982
Transportation	91,500,000	50,666,405	142,166,405
Miscellaneous fixed property	24,000,000	2,741,012	26,741,012
Other assets:			
Deferred charges	2,088,027	13,243,678	15,331,705
Investments	241,030	2,128,364	2,369,394
Sinking funds	239	16,067,666	16,067,905
Current assets	134,224,089	101,683,544	235,907,633
Total	682,053,385	372,441,006	1,054,494,391
Gary plant[2]		69,978,695	69,978,695
Tennessee Coal, Iron and Railroad Company		[3] 59,445,358	59,445,358
Adjustments[4]		3,063,594	3,063,594
Grand total	682,053,385	504,928,653	1,186,982,038

[1] As per table on page 41.

[2] Includes city of Gary and railroad property.

[3] Original cost of fixed property and additions thereto since its acquisition.

[4] Sundry adjustments made in the balance sheet without distribution by classes of property.

The Bureau has therefore computed the actual investment of the Steel Corporation in its various properties at the close of 1910 at $1,186,982,038. This compares with a total valuation in April, 1901, of $682,053,385. In other words, during the period from April, 1901, to December 31, 1910, the Corporation has made an additional net investment in its properties of no less than $504,928,653. Of this amount, roughly, $435,000,000 was virtually provided from earnings These amounts, it should be noted, are over and above the allowance for ordinary maintenance and repairs and for actual net depreciation as given above (p. 41).

This great addition to the investment of the Steel Corporation has eliminated a considerable amount of the "water" in the original capitalization of the company. The increase in the investment does not, however, exactly measure the amount of water or inflated capitalization thus offset, partly because the capitalization of the Corporation has not been the same. In the first place, the capitalization has been considerably increased, particularly through the issue of new bonds and other forms of indebtedness and also through the assumption of liabilities of several concerns which have been acquired. On the other hand, a part of this increase has been offset by the liquidation of a part of the bonded indebtedness. Although the preferred stock of the Corporation was reduced in 1903 by $150,000,000, this was accomplished only by a corresponding increase in the bonded debt, by the so-called bond conversion plan, a severely criticized operation and one involving certain objectionable features, fully discussed in the body of the report. The total net outstanding capitalization of the Steel Corporation on December 31, 1910 (including with the capitalization the purchase-money obligations and real-estate mortgages, as in previous instances, but excluding $620,352 par value of stocks of subsidiary companies not held by United States Steel Corporation), was $1,468,033,260. The excess of the capitalization over the indicated investment ($1,186,982,038) was, therefore, $281,051,222, whereas at its organization in 1901 the disparity between the two figures was $720,846,817.[1] It is apparent, therefore, that a large part of the water in the capitalization, as it may be called, has been eliminated.

The Steel Corporation undoubtedly would contend that there was not a disparity of $281,000,000 between its capitalization and the actual value of its property at the close of 1910. Indeed, the Steel Corporation in its balance sheet of December 31, 1910, claimed total assets (after deduction of current liabilities) of approximately $1,693,000,000, or, roughly, $225,000,000 over and above the outstanding capitalization as above stated. Of this excess $164,000,000 was surplus and the balance sundry reserves. This balance sheet valuation, it will be seen, is about $500,000,000 in excess of the investment as computed by the Bureau.

The Steel Corporation in defending its 1910 book valuation undoubtedly would rely in the main upon two considerations—first, that there has been an appreciation in its natural resources, particularly ore, and second, that there is a so-called "merger value" attaching to its properties because of their combination and coordination under a single control.

So far as the ore is concerned, there has been no such marked appreciation as the Steel Corporation claims. Moreover, a considerable part of whatever actual appreciation has occurred in ore values undoubtedly is due to the rapid concentration of ore property in the hands of a comparatively few interests, and especially in the hands of the Steel Corporation itself.

With respect to "merger value," it is probably true that the various properties acquired by the Steel Corporation, taken together with the organization of this company as a going concern, do have a value in excess of the sum of their values as separate entities. The coordination and integration made possible by the combination of such properties under a single control undoubtedly tend to reduce costs either through economies or through removing the necessity of paying profits to others. Further, in so far as the concentration of the industry under the control of a single concern gives to it a monopolistic power over production and prices, this may result in an increase in its earning power and consequently in an increase in its value as a going concern. This involves, however, the reduction of actual or potential competition. Indeed, much of what is ordinarily termed merger value, in so far as it exists, is to a greater or less degree a monopolistic value. To allow a single company, which has secured the bulk of a given industry, credit for such merger value, as a basis on which to earn profits, raises, therefore, a question of far-reaching public policy. In the absence or ineffectiveness of competition, either actual or potential, earnings might be obtained which, if capitalized at an ordinary rate of profit, would give a value or capitalization greatly in excess of the real investment. To regard a valuation so arrived at as justifying such profits under these conditions would be reasoning in a circle, because the real question is whether the profits themselves, used to determine the capitalization, were reasonable. For the reasonableness of profits, only two criteria are practically available, namely, first, the existence of free and fair competition, and, second, the rate of profit on the actual investment. Of these two criteria the second is the only practicable one available, where competition is not effective. Therefore both because of the vital issue involved, as well as because of the practical consideration of establishing an investment which shall permit of intelligent discussion of profits, the Bureau, while admitting there is an element of merger value in a going concern, either from great concentration of control, monopolistic power, or other influences, has made no addition therefor to the investment of the Steel Corporation.

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[1] In arriving at this figure the investment in 1901 was taken at the round sum of $682,000,000. (See p. 37.)

PROFITS OF THE STEEL CORPORATION.

The profits earned upon the investment of the Steel Corporation, as computed by the Bureau, have averaged 12 per cent for the entire period from 1901 to 1910. The extreme range was from 7.6 per cent in 1904 to 15.9 per cent in 1902.

In making a comparison of profits with investment, certain revisions of the profit statements as published by the Corporation in its reports were necessary to conform to the revisions made by the Bureau in the investment. Thus, as the Bureau has considered the investment as a whole and not merely the equity over and above bonded indebtedness, the total earnings on that investment, before payment of interest on such indebtedness, should be used; that is to say, the problem is to determine what the investment as computed by the Bureau has actually earned and not how the return on that investment has been distributed among the different security holders.

Therefore, the Bureau did not deduct interest charges from the earnings as reported by the Corporation. The usual operating, administrative, and general expenses were, of course, deducted, and also taxes, in accordance with the usual practice of corporations.

Moreover, the Bureau did not deduct certain locked-up inventory profits, so called; that is, intercompany profits on sales of materials between subsidiary companies, which have not been realized by final sale to outside interests. Such locked-up inventory profits are tentatively deducted from the earnings in the profit statements of the Corporation but are carried as a suspended surplus. While the treatment of this item is debatable, it appeared to the Bureau reasonable not to deduct such locked-up profits. Even assuming that a large part of these inventories were to be sold at figures which would fail to realize these provisional profits, on the other hand the Corporation probably would stock up again with low-cost inventories on which there would subsequently be an offsetting profit. It is a fair presumption that the bulk of these locked-up profits will eventually be realized.

The Bureau has also revised the profit statements of the Corporation by readjustment of depreciation charges. As shown above, in discussing the investment, a portion of the amounts provisionally set aside by the subsidiaries of the Corporation for depreciation really were excessive, judged from the standpoint of investment as computed by the Bureau, representing either unnecessary provisions or else amounts which were directly applied to capital additions to the property. The aggregate of these excess provisions during the period from 1901 to 1910 was approximately $38,000,000. This amount has therefore been restored by the Bureau (properly distributed by years) to the profits as shown by the Corporation's reports. (That portion expended in additions to the property has also been included in the investment.) The amounts written off from surplus by the Corporation itself to offset inflation of capitalization have not, of course, been deducted, since these have no bearing whatever upon the true depreciation of the property nor upon the true earning power of the Corporation.

There are one or two other items concerning which there might be some difference of opinion, as, for instance, the amounts set aside each year to provide for the issuance of stock on a profit-sharing basis to employees of the Corporation. Since, however, it might be argued that the amounts thus set aside really were equivalent to additional wages, and since they have been deducted from the gross earnings by the Corporation itself, the Bureau has allowed these deductions to stand.

The net result of the revisions made by the Bureau in the profit statements of the Corporation on account of these various items is indicated by the following table, which shows the net earnings as reported by the Corporation (these being the earnings before deducting interest on bonds of the United States Steel Corporation itself, and sinking-fund provisions on such bonds, but after allowing for sinking-fund provisions on bonds of subsidiary companies, which are in the main regarded as representing actual depreciation of property), together with the amounts restored or added by the Bureau, and the finally adjusted total:

ACTUAL EARNINGS OF STEEL CORPORATION ON ITS TOTAL INVESTMENT, AS COMPUTED BY BUREAU, 1901-1910.

Year.	Net earnings, as shown by annual reports.	Adjustments by Corporation in sundry accounts.	Amounts restored to earnings by Bureau.			Total adjusted earnings.
			Interest on bonds, mortgages, and purchase-money obligations of subsidiary companies.	Locked-up profits in inventories.	Excessive depreciation allowances.	
1901[1]	$75,006,230.89	....	[2]$4,500,000.00	([3])	−$1,765,000.00	$77,741,230.89
1902	108,534,374.25	−$1,207,886.84	6,113,584.34	([3])	8,062,272.00	121,502,343.75
1903	83,675,786.51	− 5,427,540.33	6,553,861.06	([3])	9,354,851.00	94,156,958.24
1904	[4]57,791,196.80	+ [4]13,108.34	6,573,146.54	−$1,254,336.48	− 631,165.00	62,491,950.20
1905	96,432,595.93	− 99,253.78	6,710,214.73	6,307,189.83	3,480,088.00	112,830,834.71
1906	125,966,938.13	− 90,501.19	6,561,478.70	2,739,403.74	8,216,388.00	143,393,707.38
1907	133,244,929.28	− 681,515.52	6,492,195.42	9,744,692.51	6,616,572.00	155,416,873.69
1908	74,882,529.11	+ 394,034.59	7,401,205.18	426,983.85	1,688,543.00	84,793,295.73
1909	107,773,099.96	+ 548,445.08	7,887,178.18	2,617,395.54	1,981,460.00	120,807,578.76
1910	116,738,157.80	− 818,182.64	7,263,453.66	2,751,307.08	1,281,348.00	127,216,083.90
Total	980,045,838.66	− 7,369,292.29	66,056,317.81	23,332,636.07	38,285,357.00	1,100,350,857.25

[1] Nine months.

[2] Approximated; this amount never computed by the Corporation.

[3] In these years these inventory profits were not deducted by the Corporation and hence need not be restored.

[4] After deducting employees' bonus fund, which in this year was taken out after stating net earnings, but which in other years is deducted before determining the net earnings.

In the following table the yearly earnings as thus computed by the Bureau are compared with the revised investment.

COMPARISON OF INVESTMENT OF STEEL CORPORATION, WITH TOTAL EARNINGS THEREON, AS ADJUSTED BY BUREAU, YEARLY, 1901-1910.

Year ended Dec. 31—	Total investment in tangible property.	Earnings as adjusted by Bureau.	
		Amount.	Per cent.
1901 [1]	$698,869,756	[1] $77,741,231	[2] 14.8
1902	763,574,919	121,502,344	15.9
1903	806,615,979	94,156,958	11.7
1904	818,238,143	62,491,950	7.6
1905	874,840,920	112,830,835	12.9
1906	947,397,884	143,393,707	15.1
1907	1,078,763,602	155,416,873	14.4
1908	1,090,425,487	84,793,296	7.8
1909	1,146,875,993	120,807,579	10.5
1910	1,186,982,038	127,216,084	10.7
Total	....	1,100,350,857	....
Average	941,258,472	[3] 112,856,498	12.0

[1] Nine months, April to December; investment includes additions during this period.
[2] Indicated rate per annum based on actual earnings for nine months.
[3] Average yearly profits for nine and three-fourths years.

As already stated, the average for the period from April 1, 1901, to December 31, 1910, is 12 per cent. The average rate for the first four and three-fourths years was 12.5 per cent, as against 11.6 per cent in the five years from 1906 to 1910. Therefore, in so far as any tendency may be noted, it is toward a lower rate of profit in recent years.

The table shows that in the years 1904 and 1908, which were years of rather marked depression in the iron and steel business, the rate of profit of the Steel Corporation fell to 7.6 per cent on the investment in 1904 and 7.8 per cent in 1908, as compared with a maximum profit of over 15 per cent in 1902 and 1906. Prior to the formation of the Steel Corporation and other large consolidations, the iron and steel industry was noted for violent changes in the rate of profit, the industry, indeed, having been aptly termed either "prince or pauper." This table shows that so far as the Steel Corporation is concerned the business, although still subject to marked fluctuations in profits, has, even in the most depressed years of this period, shown a substantial return on the actual investment.

It should be pointed out that an average rate of 12 per cent for a concern of the size of the Steel Corporation, which embraces more than one-half of the entire iron and steel industry of the country, has a very different significance than the same rate in the case of a relatively small concern. While exceptionally efficient or fortunate concerns in the steel business may earn rates in excess of this average, on the other hand a great many of the less efficient companies undoubtedly earn very much smaller rates, while in some instances the business is conducted at a loss. Therefore, an average rate of 12 per cent for over one-half of the entire steel business of the country is much more significant than the same rate or even a larger rate for a comparatively small concern. It probably means that the return on a considerable proportion of the business of the country, which under more competitive conditions and more scattered ownership would be conducted at a lower rate of profit, has been considerably increased.

It may also be noted that the investment includes a large amount of idle property, particularly unimproved ore reserves, which, of course, tends to reduce the rate. However, the investment in undeveloped iron-ore property as computed by the Bureau is not so great as to very materially affect the rate of profit. Nevertheless it is worth emphasizing that the rate of profit here given includes not only the iron and steel industry proper, but also the iron-ore mining industry. Prior to the era of consolidation the latter, to a large extent, was distinct from the manufacture of iron and steel, and under the scattered ownership of iron-mining properties then prevailing profits generally are understood to have been comparatively low, on the average. Under present conditions in the iron and steel industry, however, the Lake iron-ore industry is one of the most profitable branches of the business. This factor should be considered, therefore, in comparing the profits of the iron industry at the present time with those obtained under the different conditions formerly prevailing.

The rate of earnings on the investment of the Steel Corporation as computed by the Bureau is, of course, considerably larger than the rate of net profit upon the capitalization, as indicated by the annual reports of the Corporation, because the investment as established by the Bureau is very much less than the capitalization. The rate of 12 per cent here given, it should be clearly understood, covers the entire investment in the property, whether represented by capital stock or bonded debt. This rate of earnings on the total true investment understates the rate which accrues to the benefit of the Steel Corporation (or the stockholders as distinguished from the stockholders and bondholders combined) on that part of the true investment which may be considered as represented by the capital stock. That is to say, if that part of the true investment for which bonds were issued were deducted from the total true investment, and a corresponding amount of bond interest at the rates paid by the Corporation were deducted from the earnings, then a comparison of the remainder of the investment with the remainder of the earnings would indicate a considerably higher average profit than 12 per cent. Such a computation, however, can not be made in a definite or satisfactory manner, particularly because the original bond issues of the Corporation did not correspond with the true value of the property for which they were issued. Therefore, to deduct them from the true investment would leave an unduly low remainder for the capital stock and unfairly exaggerate the rate of profit on that part of the true investment which may be considered as contributed by the stockholders.

Hence the Bureau does not attempt to give in definite figures the rate of profit earned by the Steel Corporation on the true investment represented by its capital stock, but merely calls attention to the fact that the rate of profit above shown is not the rate earned on that part of the true investment which may be considered as contributed by the stockholders, but a lower rate earned on the total true investment and accruing to the stockholders and bondholders combined.

POSITION OF STEEL CORPORATION IN THE INDUSTRY.

The Steel Corporation, despite its great size, is not exempt from competition. Indeed, the evidence on the whole indicates that competition in the industry has steadily been increasing. Notwithstanding the great additions made by the Corporation to its properties from earnings and the acquisition of several important competing concerns, its proportion of the business in nearly every important product except pig iron and steel rails is less than it was in 1901. This is shown by the following table of percentages compiled by the Corporation from its own figures in connection with data gathered by the American Iron and Steel Association:

PROPORTIONS OF OUTPUT OF PRINCIPAL IRON AND STEEL PRODUCTS PRODUCED BY UNITED STATES STEEL CORPORATION AND BY INDEPENDENT COMPANIES, RESPECTIVELY, IN 1901 AND 1910.

Products.	Steel Corporation's percentages.		Independent companies' percentages.	
	1901.	1910.	1901.	1910.
Pig iron, spiegel, and ferro	43.2	43.4	56.8	56.6
Steel ingots and castings	65.7	54.3	34.3	45.7
Rails	59.8	58.9	40.2	41.1
Structural shapes	62.2	[3] 47.0	37.8	[3] 53.0
Plates and sheets of all kinds[1]	64.6	[3] 49.7	35.4	[3] 50.3
Black plate produced in tin mills	79.8	52.9	20.2	47.1
Coated tin-mill products	73.1	61.1	26.9	38.9
Black and coated sheets produced in sheet mills	67.3	38.9	32.7	61.1
Wire rods	77.7	67.3	22.3	32.7
Wire nails	68.1	55.5	31.9	44.5
Wrought pipe and tubes[2]	57.2	38.2	42.8	61.8
Seamless tubes[2]	82.8	55.3	17.2	44.7

[1] Includes sheets for tinning, galvanizing, and other coatings.

[2] These percentages are based on capacity and not production. The capacity of independent companies is, moreover, partly estimated.

[3] For 1909; figures for 1910 not available.

The Steel Corporation did not compute its percentage of the ore production of the country. Its proportion of the production of Lake Superior ore, such ore being practically the basis of the steel industry (arrived at by comparing the known production of the Steel Corporation with the total production as estimated by the Geological Survey), fell from 60.6 per cent in 1901 to 51.6 per cent in 1909 (figures for 1910 not being available).

This table shows that whereas the Steel Corporation in 1910 had fully maintained the share of the country's total production of pig iron which it held in 1901, its proportions of the production of nearly all steel products had declined, and in most cases sharply declined. The only important exception was steel rails. The maintenance of its proportion here is chiefly due to the erection of a very large rail mill at the new Gary plant and to the acquisition of the Tennessee Coal, Iron and Railroad Company, which had a considerable steel rail production.

Taking the production of steel ingots and castings as a basis it will be seen that the Steel Corporation's percentage of the total fell from 65.7 per cent in 1901 to 54.3 per cent in 1910. This figure, perhaps, is the best single criterion by which to judge the change in the Corporation's position in the steel industry from a producing standpoint. It will be seen that the Corporation's proportions of production of black plate, coated tin mill products, and black and coated sheets, fell off to a very marked extent, which indicates that competition has been particularly active in these branches. Its share of the production of wrought pipe and tubes and of seamless tubes likewise fell off very heavily. In wire products the Corporation has maintained its relative position rather better, but even in these there has been a marked recession in the percentages of the business done.

It should be noted that the decline in the production shown by this comparison of the 1901 and 1910 percentages was practically continuous for most products throughout the entire period. However, the actual output of the Corporation has shown a very great increase. For example, the Steel Corporation's production of crude steel ingots, which is typical of its total business, increased from 9,743,918 tons in 1902 (the first full year of operations) to 14,179,369 tons in 1910, an increase of 45.5 per cent.

While, however, these statistics clearly show the existence of active competition in production, it should be clearly pointed out that such competition has not been so evident with respect to prices, where it has been materially modified by the existence of a price policy described as "cooperation." This will be discussed in a later part of the report.

While the Corporation's proportion of the production of both raw materials and finished products thus shows a marked decrease, the proportions given do not fairly represent the true position of the Corporation in the industry as a whole. In iron ore, in particular, the Steel Corporation undoubtedly occupies a dominating position. The Corporation's holdings of what are now regarded as commercially available ores exceed those of all other iron and steel interests combined. It should be clearly understood that the ores of the Lake Superior region substantially form the basis of the steel production of the country at the present time. While the Steel Corporation has very extensive holdings of ore elsewhere, the great bulk of its ore holdings are in the Lake Superior district. In 1907 the holdings of the Steel Corporation in Minnesota, which State includes the Mesabi and Vermilion ranges, according to a carefully prepared schedule of the Minnesota Tax Commission, amounted to about 913,000,000 tons, or 76 per cent of the total ore deposits for the State.

The Corporation's proportion for the whole Lake Superior region, including the old ranges.in Michigan, is apparently about the same. Authoritative data submitted to the Senate Finance Committee in 1909 by a prominent iron manufacturer with the Steel Corporation's consent showed that the Corporation itself then reckoned on about 1,625,000,000 tons of Lake ore, of which 1,258,000,000 tons was of the current commercial standard. An estimate of a prominent mining engineer, submitted to the Finance Committee at the same time, placed the total reserves of Lake ore of the commercial standard at about 1,600,000,000 tons. On this basis, therefore, the Steel Corporation would have had over 75 per cent of the total commercially available ore in the entire Lake Superior region. Of course, the ideas of the consulting engineer and those of the Steel Corporation's experts as to what were commercially available ores may have differed somewhat, but it is not likely that the proportion of ore controlled by the Steel Corporation as shown by these two estimates is too high, because both of these statements were submitted by the manufacturer in question together with extensive data for other ore supplies in the United States for the avowed purpose of proving that the proportion of the ore supply controlled by the Steel Corporation was less than 85 per cent of the total supply. In 1908 the commercially available ore of the Lake Superior region, as computed by the United States Geological Survey, for the Conservation Commission, was 3,500,000,000 tons, but the iron content assumed as a basis for available ore was considerably lower than in the two preceding estimates, thus greatly increasing the total quantity. This and other evidence indicates that the Survey estimate is not fairly comparable with that of the Corporation.

In this connection it may be stated that the chairman of the Steel Corporation, in his testimony before the Ways and Means Committee in 1908, admitted that the Corporation had control of the ultimate ore supply of the whole country. Later, however, in 1911, in testimony before a special committee of the House of Representatives, he materially modified that statement.

In discussing the Corporation's position in the ore industry account must be taken of the fact that new discoveries of ore are constantly being made, and also that when somewhat lower grades of ore become commercially available the total reserve will be greatly increased. The use of ore of much lower grade involves, however, much higher costs of production, so that any concern which has substantial control of the best grades of ore would under such circumstances be in a position to obtain an enormous increase in profits. Taking conditions as they are to-day, there can be no doubt that the Steel Corporation has control of the great bulk of the commercially available ores of the Lake Superior district, its proportion probably being about three-fourths of the total. In addition, of course, it has there a large amount of low-grade ore, as well as immense deposits in the South. The Corporation's total ore holdings may be conservatively placed at more than 2,500,000,000 tons.

The system of leasing ore mines, as employed in the Lake region, is important in this connection. A very large part (approximately two-thirds in 1910) of the Corporation's total holdings in the Lake region is held by lease. Frequently there is no initial investment in such leaseholds, and even where a bonus is paid it is usually small, while the minimum tonnage on which royalty must be paid, whether mining operations are conducted or not, is generally unimportant. The Hill lease is, of course, as above shown, a very marked exception in the last respect.

It will be seen, therefore, that this ore-leasing system, where there is no limit placed on the number of leases that can be combined under a single interest, greatly facilitates the gathering in by a great concern like the Steel Corporation of a vast amount of ore reserves, far in advance of any commercial need for them. This not only prevents others from getting such property but also secures to such a concern the benefit of any appreciation in value which may come about either from natural causes or as a result of this very concentration of ownership. Obviously, a system which thus lends itself to such marked concentration of ore property for many years in advance (a common term of lease being fifty years), at a comparatively small cost, involves questions of the highest public importance. It might be said that the lease system as thus applied in the Lake ore region really affords an opportunity for a wealthy interest to attempt a corner in ore reserves on what is, in effect, a margin basis. Of course, in such extensive acquisitions there is a decided speculative risk, just as in similar efforts to control commodity markets, particularly, the possibility of the discovery of available deposits elsewhere, or new methods of mining which may render what are now nonavailable ores available for present commercial purposes.

The dominating position in the ore industry enjoyed by the Steel Corporation through this great ownership of ore reserves is heightened because of its very marked degree of control of the transportation of ore in the Lake Superior district. The Corporation owns two of the most important ore railroads, the Duluth and Iron Range Railroad and the Duluth, Missabe and Northern Railway. The ore rates on these railroads are about 1 cent per ton-mile. Their operating expenses are very low, that of the Duluth, Missabe and Northern in 1910 being below 30 per cent of gross earnings as against an average of 66 per cent for all the railroads of the country. The net earnings of these ore railroads, which are chiefly from the ore traffic, are phenomenal. This has the practical effect of reducing the Steel Corporation's net cost of ore to itself at upper Lake ports and, on the other hand, of increasing that cost to such of its competitors as are dependent upon the Corporation's railroads for transportation.

Hence, not only on account of its great holdings of ore but also on account of these peculiar advantages enjoyed in the transportation of the ore the Steel Corporation occupies an extremely commanding position in the iron and steel industry. Indeed, in so far as the Steel Corporation's position in the entire iron and steel industry is of monopolistic character it is chiefly through its control of ore holdings and the transportation of ore.

CHAPTER I.

THE CONSOLIDATION MOVEMENT IN THE STEEL INDUSTRY.

Section 1. Purpose and scope of the investigation.

The Bureau's investigation of the iron and steel industry has been concerned with questions of organization, capitalization, investment and profits, prices and price control, and costs.

As a result of the era of consolidation which marked the close of the nineties, the greater part of the iron and steel industry of the country was transferred from a large number of actively competing and generally small concerns to a few large companies, more than one-half of the industry, indeed, being finally, in 1901, merged under the control of a single organization, the United States Steel Corporation. Such centralization of this great basic industry of the country necessarily involves considerations of utmost importance to the public welfare. This centralization has an especial significance, because it has resulted in concentrating the ownership of one of the most important natural resources of the country—iron ore.

This consolidation of the iron and steel industry was accompanied by a great increase in total capitalization. It may fairly be said that during the period from 1898 to 1901 the industry was recapitalized, and recapitalized on a basis far in excess of the actual investment. It therefore becomes important to determine the relationship between such capitalization and the investment represented thereby, and also to determine the profits earned upon such investment. For the purpose of intelligent analysis a brief review of the consolidation movement, and particularly of the causes which led to that movement, is essential. All these matters are taken up in the present part (Part I) of the report. In a subsequent part there will be taken up a study of prices and price control, with the particular object of determining the conditions under which prices have been established and how far they have been affected by the centralization of ownership just referred to. Another portion of the report will be devoted to a study of costs by principal products, with a view to furnishing a basis for discussing prices and profits of specific products, as distinct from profits as a whole in relation to the total investment.

The investigation has been restricted to concerns engaged in the iron and steel industry in the modern and narrower sense of the word; that is, the production of pig iron, crude steel (ingots) and semifinished steel (billets, slabs, sheet bars, etc.) and the simpler products which are now ordinarily manufactured at an iron and steel establishment and the rolling mills operated in connection therewith. Moreover, except for pig iron, the inquiry has been concerned with steel rather than with iron, which has largely been displaced by steel. The more important of the simpler steel products are rails, beams, plates, merchant bars, wire rods, tubes, and sheets. In addition, there are certain others in which the manufacturing process is carried somewhat beyond the rolling-mill stage, but usually connected closely with rolling operations, such as drawn wire, wire nails, galvanized sheets, and tin plate.[1]

On the other hand, the investigation has not embraced companies engaged primarily in the manufacture of such steel products as armor-plate, castings, or ordnance, nor the great variety of highly elaborated iron and steel products, such as tools, implements, and machinery; nor has much attention been paid to the foundry branch of the iron industry. Any attempt to include these branches in an investigation of this character would lead to such multiplication of detail as to obscure the primary features of the inquiry.

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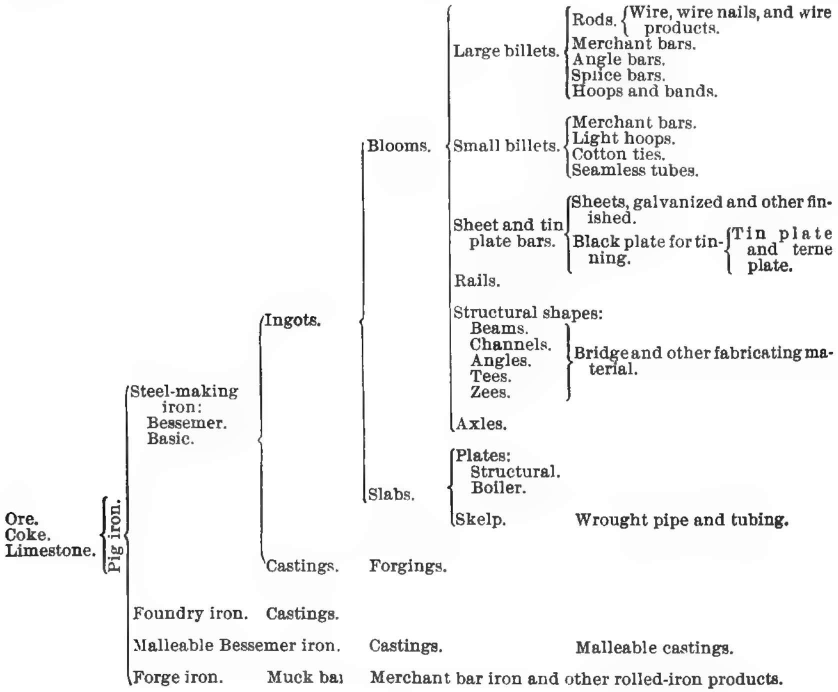
[1] An idea of the sequence of the stages in the production of the articles under discussion may be obtained from the following diagram:



The investigation has, in the main, been confined to a comparatively few concerns. Naturally, chief attention has been paid to the United States Steel Corporation, as by far the most important factor in the industry. The United States Steel Corporation and half a dozen other leading companies to-day handle substantially 75 per cent of the crude and simpler finished steel production of the country, the United States Steel Corporation alone doing rather more than 50 per cent of the total (its percentage originally was higher; see p. 365). For these large companies—as well as for a number of smaller, but important, concerns—extensive data were obtained by the Bureau respecting capitalization, properties, output, and costs.

I. PROGRESS OF COMBINATION PRIOR TO 1898.

Section 2. Occasional instances of consolidation in early nineties.

During the period from 1890 to 1900 there was a practically complete reorganization of corporate interests and relationships in the steel business. This was, of course, especially manifested in the enormous development of consolidation.

In 1890 there were scarcely any consolidations of the modern type in the steel industry. With only a few exceptions there were no concerns with a capitalization exceeding or even approaching $20,000,000. During the middle nineties there was a gradual change toward larger units, both by expansion and by combination; but the depressed conditions of that period were unfavorable to the organization of great corporations, and as late as 1898 the steel industry was characterized by the competition of a large number of independent concerns. The year 1898, however, witnessed a marked advance toward consolidation. This movement progressed with great rapidity in the next few years, until by the middle of 1901 substantially three-fifths of the steel industry of the country was concentrated under a single organization—the United States Steel Corporation—with an issued capitalization, including bonded indebtedness, of over $1,400,000,000.[1]

It would be incorrect to assume that this transformation was entirely the work of three and a half years. Instead, even in the early nineties there were some suggestions of the subsequent marked concentration. Not only were there a number of conspicuously large units at this time, but in some instances these were the direct result of consolidation. Thus, as early as 1889 the Illinois Steel Company had been organized with an annual pig-iron capacity of over 750,000 tons and with an authorized capital stock of $25,000,000, of which approximately $18,000,000 was issued at the time. This company was a consolidation of three previously competing steel concerns (see

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[1] Including the bonds of subsidiary companies. (See p. 112.)

p. 120), with plants at Chicago, Joliet, and Milwaukee. Again, in 1892, the Carnegie Steel Company (Ltd.), a partnership, was organized, with a capital stock of $25,000,000. This was the largest single unit in the industry at that time, its annual pig-iron capacity being approximately 1,200,000 tons. All of its plants were in the Pittsburg district. The company had some features of the modern consolidation, in that it had acquired several important competing steel works. It also had a substantial interest in the H. C. Frick Coke Company, the largest single factor in the coke industry. Since, however, most of the interests comprising it had long been affiliated, the Carnegie company at that time can hardly be regarded as a consolidation in the full modern sense of the term.

The Jones & Laughlin interests, in the Pittsburg district, were another important factor in the industry. In the early nineties these comprised two limited partnerships—Laughlin & Co. (Ltd.), with a capital stock of $900,000, operating the Eliza Furnaces, and Jones & Laughlins (Ltd.), with a capital stock of $4,000,000, operating the American Iron and Steel Works. These interests were at all times a prominent factor in the industry, and they later greatly expanded their operations.

Farther east there was the Lackawanna Iron and Steel Company, organized in 1891, with $3,750,000 capital stock, as a merger of the Lackawanna Iron and Coal Company and the Scranton Steel Company. The former concern had been incorporated in 1853 to operate coal mines and manufacture pig iron at Lebanon, Pa., and had erected a Bessemer steel plant in 1875. The Scranton Steel Company was organized in 1881 as a competitor.

Another large eastern concern at this period was the Pennsylvania Steel Company, organized in 1866, with a plant at Steelton, Pa. (not far from Harrisburg). In 1887 it organized a subsidiary concern—the Maryland Steel Company—and through it built a second plant, at Sparrow Point, Md., near Baltimore. The parent company was involved in difficulties in the depression of the early nineties and was reorganized in 1895 with a capital stock of $6,500,000. Subsequently this was greatly increased. (See p. 96.)

Two other concerns which should be mentioned in this connection are the Colorado Fuel and Iron Company, at that time the only important factor in the industry in the far West, and the Tennessee Coal, Iron and Railroad Company, the leading interest in the South. The Colorado Fuel and Iron Company was organized in 1892 with a capital stock of $13,000,000, as a merger of the Colorado Fuel Company and the Colorado Coal and Iron Company. It was chiefly interested in the operation of coal properties, although the Colorado Coal and Iron Company, one of the constituent concerns, had iron ore lands and a small steel plant. In the late nineties the company entered the steel business on an extensive scale.

The Tennessee Coal, Iron and Railroad Company had its beginning early in the fifties as a coal company. It first entered the iron business in 1881, its name being changed at that time from the Tennessee Coal and Railroad Company to the Tennessee Coal, Iron and Railroad Company. During the eighties and early nineties the company acquired several important coal and iron concerns. From this time on it has been the leading owner of such property in the southern iron district. The company, while a large producer of pig iron, did not enter the steel business proper until after 1898.

Several other concerns, like the Cambria Iron Company and the Bethlehem Iron Company, both of which were located in Pennsylvania, also were distinguished in the trade at this early date by the extent of their operations.

Most of these larger concerns just named were engaged chiefly in the production of the simpler and heavier forms of steel products, like rails, plates, and beams, or of semifinished steel (billets, slabs, bars, etc.) for the trade. As shown in the next section, many manufacturers of the more elaborated products—such, for instance, as nails, wire, tin plate, and tubes—did not at this early date produce the semifinished steel which they needed, but instead purchased their supplies of this raw material from large steel-making concerns such as those just described.

With respect to these simpler or heavier forms of steel, a comparatively small number of concerns had even in the early nineties assumed a preponderating influence. Thus, the Carnegie Steel Company (Ltd.), the Illinois Steel Company, the Jones & Laughlin interests, the Lackawanna Iron and Steel Company, the Pennsylvania Steel Company, the Cambria Iron Company, and the Bethlehem Iron Company probably controlled in 1898 not less than 50 per cent of the steel-ingot production of the country. These concerns were, however, distinct entities with respect to ownership, and despite the existence of price agreements, discussed later (see sec. 4), the distinguishing feature of the steel industry during this early period as a whole was active competition.

Outside of the companies engaged in the manufacture of the cruder or heavier forms of steel, there were comparatively few concerns of great magnitude in the industry in the early nineties, and very few consolidations. In the wire and nail trade, it is true, a $4,000,000 merger, the Consolidated Steel and Wire Company, had been organized as early as 1892. Generally speaking, however, the manufacture of such products as nails, tin plate, sheets, and bar iron was distributed among a large number of concerns, many of which were comparatively small, and competition in these departments of the industry, except as modified by pool and price agreements, was exceedingly active.

In the iron-mining industry substantially similar conditions existed. There were a few large concerns, like the Minnesota Iron Company, organized in 1882 with $10,000,000 authorized capital (later increased to $20,000,000), and the Lake Superior Consolidated Iron Mines, organized in 1893, with $30,000,000 capital stock. Each of these concerns owned an important ore railroad. (See pp. 122 and 148.) A few other iron-mining concerns were exceptionally prominent, but as a rule the ownership of iron-ore properties was widely scattered, and in this, as in the manufacturing branch of the industry, competition, rather than concentration, was the distinguishing characteristic, although this competition also was modified by price agreements.

Section 3. Integration in the early nineties not far advanced.

Another feature of the steel industry in the early nineties in contrast with conditions to-day was the comparative lack of integration. "Integration" may be defined as the assembling of the different successive branches of the industry, such as the production of iron ore and fuel and the manufacture of pig iron and steel products, under a single control. Each principal department of the industry was, to a considerable extent, although by no means wholly, distinct, so far as ownership was concerned. Thus, the production of ore, broadly speaking, was a business by itself, and comparatively few iron and steel companies had extensive holdings of ore lands. This was especially true of the ore supplies in the Lake region; in the East the ownership of ore lands by steel makers was rather more common. Moreover, a substantial proportion of the country's pig iron was produced by "merchant" furnaces, which sold their product instead of manufacturing it into more finished articles. Even the larger manufacturers of steel bought considerable quantities of pig iron. Again, the production of steel, as pointed out in the preceding section, was in the hands of a comparatively limited number of concerns, and most manufacturers of finished articles purchased their supply of semifinished steel instead of producing it. For the transportation of their products, either raw or finished, nearly all iron and steel companies were dependent upon railroad and vessel concerns, the ownership of which was entirely separate.

However, even at this early date the tendency toward integration, particularly through the acquisition of reserve supplies of ore and coal, had already taken shape. Naturally it was most marked in those sections where deposits of these raw materials were found in close proximity. Indeed in some sections of the country the iron and steel industry may be said to be integrated by nature. Thus, several iron and steel concerns in eastern Pennsylvania, where ore deposits were near the anthracite coal regions (anthracite for a long time being extensively used in the production of pig iron), had early made considerable investments in such properties. Similarly, in the Birmingham district in the South, the occurrence in close proximity of vast supplies of these basic raw materials very early led iron makers to adopt a policy of owning such property in connection with their furnaces and other plants.

In the numerous establishments of the Middle West, however, integration with respect to raw materials had made less headway. One reason for this was that many manufacturers in this section were largely dependent upon the Lake region for their supply of ore, while others were at some considerable distance from the coal regions. This physical separation of supplies of raw materials was naturally more or less accompanied by separation with respect to ownership. A further reason probably was that at this early date some steel manufacturers were not in a position to provide the additional capital necessary to carry extensive reserve supplies of ore and coal, although, with respect to ore, owing to the very general employment of the lease system in the Lake region (see p. 229), this was a secondary consideration. Furthermore, the fact that the ownership of the great ore and coal deposits of the country was at this early date scattered among a large number of interests who were in active competition made it practicable for iron and steel makers to rely upon the open market for their supplies of these primary materials.

Nevertheless, even in the Middle West considerable progress had been made by iron and steel makers toward the control of supplies of ore and fuel. Thus, the Illinois Steel Company in the early nineties had acquired a considerable acreage of coking coal lands in Pennsylvania, and it also had secured some iron ore lands in the Lake Superior region. Moreover, the ownership of the Minnesota Iron Company, which controlled extensive ore deposits in the Lake region, as well as a railroad and a fleet of Lake ore vessels, was partly in the hands of Illinois Steel Company capitalists. The latter company had, therefore, made decided progress in the direction of integration.

Another instance of integration was furnished by the Carnegie Steel Company (Ltd.). Through the H. C. Frick Coke Company, an allied concern, the Carnegie company had secured enormous reserves of coking coal. In the scale of its manufacturing operations, this company had made remarkable progress, and probably led all its rivals in this respect.

The Carnegie company, however, had not carried the policy of integration far with respect to the ownership of ore lands; instead, in the early nineties the company depended almost wholly for its supply of ore upon purchases in the open market, or upon short-time contracts with ore producers. In 1892 the first step in the direction of providing itself with a future supply of ore was taken in the acquisition of a half interest (which was later increased) in the Oliver Iron Mining Company, which at that time held leases of several important mines on the Mesabi Range. The annual supply of ore covered by this arrangement, however, was small in comparison with the Carnegie company's total requirements. Moreover, at this time Mr. Carnegie is said to have been decidedly opposed to the ownership of ore mines, and instead he preferred to let others assume the heavy speculative risks which then attended iron-mining enterprises. About 1896 the company completely reversed its policy in this respect. This change of policy, which is considered later (see p. 76), undoubtedly had considerable effect in directing the later course of events in the iron and steel industry as a whole.

While important steps toward making themselves independent with respect to supplies of raw materials, as well as toward concentration of manufacturing operations, had thus been taken in the early nineties by some of the leading steel companies, nevertheless a fair statement of the general situation in the steel industry at that time would be that this policy was confined to a comparatively few of the larger concerns, and that in the main it had not been carried far even by these.

Section 4. Early pools and price agreements in the steel industry.

It is clear from what has just been said that competition was the keynote of the iron and steel industry in the early nineties. However, the spirit of combination was by no means wholly absent. The mere fact that at this early date important consolidations had been organized in several other industries, notably in the case of oil, white lead, sugar, tobacco, and leather, shows that there was a general tendency in that direction. As a matter of fact, efforts toward concentration in the steel industry had been very numerous. As a rule, however, they had taken a less substantial form than the "trusts" which had been organized in some other industries, or the corporate consolidations of the present day. A common method of combination in the iron and steel industry at that period was a loose association, under which the individual concerns retained their identity and to a large extent their independence; certainly complete independence in ownership. Such unions, which assumed a great variety of form in detail, may roughly be grouped under two general types—the "pool" and the "gentlemen's agreement." They had been employed repeatedly in the iron and steel industry. Many of these combinations were short lived and ineffective. This was especially true of the gentlemen's agreement, which, as the name implies, was little more than an informal arrangement on the part of the members to abide by certain promises. The pool was a more formal and, in some instances, a much more effective organization.

Four typical pools in this early period were (1) the steel-rail pool, (2) the wire-nail pool, (3) the billet pool, and (4) the ore pool. These four pools are briefly described in the following pages. It should be understood that there were many other organizations of a similar character, and that these are discussed simply to illustrate different forms of such combinations. Such agreements will be referred to more extensively in a later part of the report.

THE STEEL-RAIL POOL.—By far the most important pool organization in the steel industry at this time was that in steel rails. This pool was formed on August 2, 1887, and, while it was dissolved in 1893, it was speedily renewed and continued in existence until the early part of 1897.[1] The general nature of this pool may perhaps best be indicated by reproducing the following copy of the memorandum of agreement:[2]

> *Memorandum of agreement, entered into August 2, 1887, by and between the North Chicago Rolling Mill Company, the Cambria Iron Company, the Pennsylvania Steel Company, the Union Steel Company, the Lackawanna Iron & Coal Company, the Joliet Steel Company, the Western Steel Company, the Cleveland Rolling Mill Company, Carnegie Brothers & Co., Limited; Carnegie, Phipps & Co., Limited; the Bethlehem Iron Company, the Scranton Steel Company, the Troy Steel & Iron Company, the Worcester Steel Works and the Springfield Iron Company.*
>
> We, the before-named companies and corporations, manufacturers of steel rails, hereby mutually agree one with the other, that we will restrict our sales and the product of steel rails of 50 pounds to the yard and upward, applying to orders taken by us and to be delivered by us or from our respective works during the year 1888, as hereinafter allotted and limited; and we respectively bind ourselves not to sell in excess of our current allotments, without first obtaining the consent of the Board of Control thereto—that is to say:
>
> It is agreed, there shall now be made an allotment of 800,000 tons of rails, which shall be divided and apportioned to and among the several parties hereto to be sold by them during the year 1888, upon the following basis of percentages, to wit: North Chicago Rolling Mill Company, $12\frac{1}{2}$ per cent; Pennsylvania Steel Company, $9\frac{8}{10}$ per cent; Bethlehem Iron Company, 9 per cent; Carnegie Bros. & Co., Limited, and Carnegie, Phipps & Co., Limited (jointly), $13\frac{5}{10}$ per cent; Joliet Steel

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[1] Somewhat later it was revived.

[2] From Iron Age, November 16, 1893.

Company, 8 per cent; Lackawanna Iron & Coal Company, 8 per cent; Cambria Iron Company, 8 per cent; Scranton Steel Company, 8 per cent; the Union Steel Company, 8 per cent; Cleveland Rolling Mill Company, $4\frac{8}{10}$ per cent; Troy Steel & Iron Company, $4\frac{5}{10}$ per cent; Western Steel Company, $4\frac{5}{10}$ per cent; Worcester Steel Works, $1\frac{4}{10}$ per cent.

And in addition to the said allotment of 800,000 tons of rails above allotted, an additional allotment of 250,000 tons is hereby made and allotted to the Board of Control, to be reallotted and reapportioned by it, as and to whom it may deem equitable, in the adjustment of any differences that may arise. It being also further agreed that all subsequent allotments of rails hereafter made, to be sold under this agreement during the year 1888, shall also be divided and apportioned to the several parties hereto in the same ratio of percentages as said apportionment of 800,000 tons is herein divided and apportioned.

It is further agreed, that the Board of Control shall, from time to time, make such further allotments as shall be necessary to at all times keep the unsold allotments at least 200,000 tons in excess of the total current sales, as shown by the monthly reports of sales. This is to be in addition to the then unappropriated part of the 250,000 tons hereinbefore allotted to the Board of Control to adjust differences.

It is further agreed, on the first day of April, July and October, the Board of Control are authorized and directed to cancel such part of the unmade allotments of the respective parties hereto as they the said Board of Control shall determine such party unable to make in due time, and all allotments so canceled the Board of Control shall have the right to reallot to any of the other parties hereto; it being understood that all such cancellations shall apply only to allotments standing to the credit of the respective parties hereto on the dates above named, but no reallotment as aforesaid shall be made by the Board of Control to any of the parties hereto for the purpose of enabling them, or any of them, to make and sell rails from foreign made blooms.

It is further agreed, that all transfers of parts of allotments from one party to another shall be made by the Board of Control.

It is further agreed, that there shall be a Board of Control, consisting of three members, namely, Orrin W. Potter, Luther S. Bent and W. W. Thurston, who shall have power to employ a paid secretary and treasurer.

It is further agreed, that the Board of Control, upon the written consent of 75 per cent of the percentages as hereinbefore named, shall increase the allotments for the year 1888, and such increase shall be allotted to the parties hereto as hereinbefore provided.

It is further agreed, that each party whose name is hereunto annexed, shall and will make monthly returns to the Board of Control of all contracts for delivery of rails of 50 pounds to the yard and upward during the year 1888, and also of all shipments of such rails made by them during said year; a copy of such return shall be furnished to each party hereto.

It is further agreed, that all the parties hereto shall and will, on or before January 15, 1888, make a written return to the Board of Control of all rails of 50 pounds to the yard and upward (designating the weight) which they respectively had on hand January 1, 1888, stating whether the same are sold, and if sold, on what order they apply.

It is further agreed, that the Board of Control shall have the right whenever they deem it expedient to convene a meeting of the parties hereto, and they shall give at least ten days' previous notice of all meetings, and any business transacted at such meetings, and receiving 75 per cent of the votes present thereat, either in person or by proxy, shall be binding on all the parties hereto, excepting as to a change in percentages as aforesaid.

The Board of Control shall be required to call a meeting of the parties hereto when requested so to do in writing, signed by any three of the contracting parties, but such request and such notice shall state the object for which such meeting is called.

It shall be the duty of the Board of Control to have a proper record kept of all the returns made to it, with power from time to time to change the form of return as they may deem expedient.

The Board of Control shall have authority to levy an assessment, pro rata to the allotted tonnage, to defray the actual expenses made necessary to carry out this agreement.

It is further agreed, that we will, respectively, immediately make return to the Board of Control of all rails of 50 pounds to the yard and upward which we are now under contract to deliver during the year 1888, said return to state to whom such rails are sold and when they are to be delivered.

North Chicago Rolling Mill Company, by O. W. Potter, president; Cambria Iron Company, by E. Y. Townsend, president; Pennsylvania Steel Company, by Luther S. Bent, vice-president; The Union Steel Company, by H. A. Gray, secretary and treasurer; Lackawanna Iron & Coal Company, by B. G. Clarke, vice-president; Joliet Steel Company, by W. R. Stirling, treasurer; Western Steel Company, by A. M. Wilcox, president; Cleveland Rolling Mill Company, by Wm. Chisholm, president; Carnegie Bros., Limited, by D. A. Stewart, V. C.; Carnegie, Phipps & Co., Limited, by John Walker, chairman; The Bethlehem Iron Company, by Wm. W. Thurston, vice-president; The Scranton Steel Company, by W. W. Scranton, president; Troy Steel & Iron Company, Selden E. Marvin, secretary; Worcester Steel Works, by Samuel D. Nye, manager; The Springfield Iron Company, by Charles Ridgely, president.

This agreement, it will be seen, was designed to provide a very effective control of the production of steel rails by members of the pool, who together manufactured at that time more than 90 per cent of the country's output.

The distinguishing characteristics of the rail pool were a fairly compact organization and the inclusion of nearly all rail manufacturers, while the rather extensive plant necessary for the production of rails tended to discourage new competition. The bulk of railroad purchases of steel rails, moreover, are usually made once a year. These conditions favored the maintenance of pool prices and probably explain the stability of this pool as compared with others in the iron and steel industry at this period.

However, the rail pool was by no means completely successful. Despite its fairly compact organization, it collapsed in the latter part of 1893 as a result of disagreements over the allotment of tonnage, aggravated by the commercial depression of that year. In 1894, after numerous conferences, it was reorganized, but the slack demand of 1896 resulted in new infractions of the agreement, as a result of which the pool collapsed in February, 1897. This second disruption of the pool was followed by a brief but exceedingly bitter price war, during which sales of steel rails were made freely at prices ranging from $20 to $15 per ton. The nominal pool price of rails had for some time been $28.

THE NAIL POOL.—Next to the steel-rail pool, perhaps the most remarkable pool in the steel industry at this early period was the so-called wire-nail pool. This included manufacturers of cut nails as well; in fact, the official title was "The Association of Wire and Cut Nail Manufacturers." The formal organization of the pool, which had been preceded by temporary price agreements, was completed in the early part of 1895.[1]

The nail pool differed from the steel-rail pool, first, in that its membership was decidedly larger, and, second, in that the investment needed to engage in the business was comparatively small. It is claimed that an investment of $10,000 in nail machines was sufficient to permit the manufacture of nails on a practicable, although of course limited, scale. This organization was, therefore, at all times especially vulnerable to competition.

The general nature of this pool is well indicated by the following excerpt from an article in the Iron Age of December 3, 1896, shortly after its dissolution:

> The aim of the association was to control the market, both in the matter of production and prices. The determination of the percentages of the different manufacturers was obviously a matter of some delicacy, but the quota of each was satisfactorily determined on a three-fold basis—(1) actual sales in a given period of three months; (2) actual production of one of these months; (3) the capacity of the mill as shown in the number of machines. The average of these three elements determined the participation percentage of the different manufacturers. The association also regulated the amount of nails to be offered for sale each month and the price at which they should be sold.

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[1] See also page 75.

> The manufacturers in Canada were also negotiated with and a perfect understanding reached. Efforts were also made to keep European makers out of this market, but without much success. Not much difficulty was experienced in making it hard for outside manufacturers to obtain wire-nail machines, but this involved a considerable outlay on the part of the association. It was also found necessary after a while to have inspectors at all the factories to see that no irregularities were permitted, and this, together with the administration of the affairs of the association, entailed a heavy expense, to meet which a large proportion—latterly more than half—of the price paid by the merchant for nails was turned over by the manufacturers into the treasury of the association. A fund was thus created for the carrying on of the association, for payment of rebate to jobbers, for subsidies to outside makers, etc.
>
> Another essential feature of the association's working was the control of the jobbers, who were * * * prohibited from purchasing nails made by outside manufacturers and from selling below the association prices. This involved the establishment of an elaborate system of prices, perhaps more detailed and comprehensive than was ever before attempted in the hardware line.

Immediately after its organization the pool advanced the prices of nails to an exorbitant figure. The "base" price was raised from $1.20 per keg in June, 1895, to $2.55 by May, 1896, or in less than twelve months. The real advance, however, was considerably greater than these figures indicate, owing to certain changes made in the methods of quoting nail prices. Thus, while the old base price applied to certain sizes of nails, no sizes were sold at the new base quotation, but instead large "differentials" were added for even the cheapest grades of nails. This feature of the nail "card," as it was called, was a source of acute irritation to customers of the pool.

The pool had a comparatively brief existence. About the first of December, 1896, or some eighteen months after its organization, it suddenly collapsed. Its failure was directly attributed at the time to the great increase in competition which resulted from its policy of exacting high prices. Such competition, as already pointed out, was facilitated by the fact that only a very moderate investment was necessary to enter the business on a commercial scale.

THE STEEL-BILLET POOL.—This pool was formed in April, 1896, under the name of "The Bessemer Steel Association of the United States." The agreement, which was along the same lines as that of the steel-rail pool, provided for a definite allotment of tonnage among the members, the maintenance of prices, the payment of penalties for exceeding the tonnage allotments, and compensation, on the other hand, to those members who did not make the maximum production to which they were entitled.

The billet pool had a stormy existence from the start. This was due partly to the fact that it failed to include several important manufacturers of billets, but more particularly to internal dissensions. An especial source of weakness was that while some of its members made nothing but the cruder steel products, such as billets, slabs, etc., and were therefore dependent upon the outside market, several of the larger concerns in the pool had their own finishing mills, which thus afforded them an outlet for a large quantity of their semifinished steel. The agreement as originally drawn up did not cover billets thus used by pool members themselves in the manufacture of finished products. As a result, such concerns took advantage of the situation by entering into heavy sales of finished material, and at prices so low that outside finishing mills were unable to compete and at the same time pay the pool price of billets. Consequently there was a heavy reduction in the trade demand for billets, and those members of the pool who were dependent upon this outside demand naturally became intensely dissatisfied. As a result of these conditions, the pool was apparently on the point of disruption during the summer and fall of 1896. In November the arrangement was amended by including in the tonnage allotment steel used by pool members in the manufacture of finished material as well as that sold in the cruder forms. This change, however, had hardly been accomplished when fresh difficulties arose over alleged bad faith of some of the members. In the first week of December, 1896, one member of the pool, the Bellaire Steel Company, formally announced its withdrawal. This action was promptly followed by the collapse of this pool.

THE ORE POOL.—This pool, which was called the Bessemer Ore Association, embraced the leading ore-producing interests in the Lake Superior region. The keen competition which ordinarily exists in a mining business where ownership of ore properties is scattered was intensified by the commercial panic of 1893, and profits, for many mining concerns, had practically disappeared. The pool agreement contemplated a rigid control of the business. Aside from fixing prices for ores, it also undertook to make a definite allotment of production, both as to mining ranges or districts and also as to the individual mining companies included in its membership.

Owing to important changes in the ore industry in 1896, some of which are noted later, the ore pool was threatened with disruption, and in the spring of 1897 it seemed almost certain that no agreement would be made for the coming season's business. An arrangement was nevertheless entered into by some of the leading producers, but on a very much lower basis as to price. Thus, whereas the standard price for Gogebic ores in 1896 had been $4 a ton, the basis in the 1897 agreement was about $2.75.[1]

OTHER POOLS.—Among other similar agreements in the steel industry in the middle nineties was that in structural steel, which undertook, in addition to the maintenance of prices, an allotment of tonnage; another important combination was the cast-iron-pipe pool, which was eventually declared illegal by the Supreme Court of the United States.[1]

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[1] See page 77.

GENTLEMEN'S AGREEMENTS.—These organizations were so numerous as to forbid specific description. It is safe to say that hardly any branch of the iron and steel industry was entirely free from such efforts to secure control of prices. The gentlemen's agreement proper was distinguished from the pool in that no formal organization for regulating output or prices existed, the efficacy of the agreement simply depending upon the faithfulness of the members in maintaining informal pledges. Such gentlemen's agreements contained no provision for forfeits in case of infraction, or for the acquisition or subsidizing of outside plants to prevent competition.

Section 5. Weakness of pool agreements a contributory cause of the organization of corporate consolidations.

Notwithstanding the various attempts at combination by means of pools and other agreements, such as those described in the preceding section, the statement holds true that competition was the dominating feature of the iron and steel industry in the early and middle nineties. This is, indeed, really indicated by the great difficulty experienced in maintaining pool agreements, which of course had no legal sanction. With the exception of the steel-rail pool, most of these organizations had a precarious existence, the agreements being subject to frequent violation. In the latter part of 1896, and the early part of 1897 in particular, there was a rather general abandonment of such combinations. Thus, the collapse of the wire-nail and billet pools was soon followed by the disruption of the steel-rail pool itself; a number of other similar agreements were also abandoned, at least temporarily, about this time. (In many instances similar agreements were again entered into at a later date. This matter will be dealt with in a later part of the report.)

These experiments at combination, however, undoubtedly tended to hasten the progress of the consolidation movement proper. The success, even though brief, of some of these pool organizations in securing large profits for their members had illustrated the advantages of concerted action. At the same time the low prices which followed the disruption of these associations, coming as they did after several years of acute depression in the industry, had a very discouraging effect, and manufacturers were ready to listen to almost any plans which promised increased profits. The failure of these pool agreements was, therefore, promptly followed by schemes for still more comprehensive and more permanent organizations. Thus, on the collapse of the wire-nail pool, several of the leading makers of wire nails, together with promoters, planned an absolute consolidation of the principal wire-nail interests of the country into a $75,000,000 corporation. This project fell through just as it appeared to be on the eve of consummation. However, about three weeks later a partial consolidation of wire interests was effected, and in January, 1899, practically the entire industry was concentrated in the hands of a single company. (See p. 129.) Similar consolidation schemes were taken up in various other departments of the steel industry. While these were not completed at once, the consolidation movement acquired a distinct impetus in 1897.

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[1] Addyston Pipe and Steel Company *v.* United States, 175 U. S., 211.

This new tendency of combination efforts was clearly recognized at the time, as may be seen from the following excerpt from a review by the Pittsburg correspondent of the Iron Age, published in the issue of that periodical for December 30, 1897:

> In writing under this head last year we said that there seemed to be only one way to successfully carry on business, and that was on the principle of "the survival of the fittest." Events of 1897 have confirmed this statement. The rail, beam, nut and bolt, and other pools have been dissolved, and the business goes to those concerns best equipped to take it. The rail pool was undoubtedly the most successful ever formed and made immense sums of money for the concerns composing it. In time, however, it became impossible to hold it together. Competition had sprung up and the subsidies demanded by outside concerns were so large that to pay them was becoming a burden.
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> * * * * * * *
>
> The collapse of these pools showed very conclusively that pools, even where there were penalties involved, were not always successful, and another method of controlling certain lines of manufacture is being tried. This is by outright purchase and is now under way in the rod and wire trades. * * * Another deal which has been on the carpet for some time is an amalgamation of the bridge-building interests.

Section 6. Consolidation movement hastened by change in policy of Carnegie Steel Company toward ore supplies.

A specific influence which hastened outright consolidation in the steel industry was a radical change on the part of the Carnegie interests in their attitude toward ownership of ore reserves. The comparative indifference of the Carnegie concern in the early nineties to the control of ore properties was abandoned in the latter part of 1896, when the company executed a contract with the Lake Superior Consolidated Iron Mines (owned chiefly by Rockefeller interests; see p. 147), providing for the lease, for a period of fifty years, of ore properties capable of furnishing a large annual tonnage, at a royalty of 25 cents per ton. An important feature of the contract was that the transportation of this ore was to be over the Duluth, Missabe and

Northern Railway (the stock of which was held by the Lake Superior Consolidated Iron Mines), and down the Lakes in the vessels of the Bessemer Steamship Company, which was also a Rockefeller concern. Indeed, the contract appears to have been entered into by the Rockefeller interests mainly because of the assurance of a liberal tonnage for their rail and steamship properties thus afforded.

The circumstances which brought about this important deal are not definitely known. On the one hand, it was reported that the Carnegie interests had threatened to secure their ore supplies elsewhere unless the Lake Superior Consolidated Iron Mines agreed to this arrangement. On the other hand, there had been rumors that the Rockefeller interests were about to engage in the manufacture of steel.

The announcement of this arrangement practically demoralized the ore industry for the time being. Prices of iron-mining stocks dropped sharply. In this connection it may be noted that Henry W. Oliver, in a letter to H. C. Frick, chairman of the Carnegie Steel Company (Ltd.), under date of July 27, 1897, said:[1]

> I desire to impress upon you the fact, that if it had not been for our Rockefeller-Mesabi deal of last year, with the consequent demoralization in the trade caused by the publication thereof, it would not have been possible for us to now secure the other Range properties I propose to acquire, either by lease or for any reasonable price. We simply knocked the price of ore from $4 down to, say, $2.50 per ton. Now let us take advantage of our action before a season of good times gives the ore producers strength and opportunity to get together by combination.

In the steel industry the news of this transaction was very generally accepted as a depressing influence and as equivalent to a declaration on the part of the Carnegie interests that they proposed to put themselves in an impregnable position by effecting every possible economy in manufacture. The Chicago correspondent of the Iron Age referred to the transaction as "another decidedly depressing influence which is taken as portending much lower prices in the future."

The Carnegie interests were not slow to take advantage of this situation, and they followed up this deal by the lease of a large number of other mining properties in the Lake region, until, a few years later, they controlled an extensive reserve tonnage. The great bulk of these acquisitions was through lease and not by purchase in fee, so that only a comparatively small amount of capital was required for this purpose. (See p. 216.)

These leases of iron-mining properties by the Carnegie concern created a profound impression upon the trade. Statements were repeatedly made that the Carnegie Steel Company (Ltd.) proposed to make itself the dominating factor in the industry.[1] These acquisitions of ore property by the Carnegie interests were generally taken by other large steel manufacturers as a warning to strengthen their own positions with respect to reserves of ore and coal. Predictions were made by trade authorities at the time that the Carnegie purchases would be followed by a similar expansion or merger on the part of some of the rivals of that concern. These predictions proved to be well founded. Thus, in the summer of 1898, or within about eighteen months after the Carnegie-Rockefeller deal became generally known, the Illinois Steel Company and the Minnesota Iron Company were formally consolidated, together with some other properties, into the Federal Steel Company. (See p. 117.) As already stated, the ownership of the Illinois and Minnesota concerns had for some time been in part in the same hands, but the formal merger of these properties appears to have been hastened by the aggressive policy of the Carnegie interests. About the same time, moreover, several other consolidations in the steel trade were seriously considered and, although these projects were not then consummated, they well illustrate a tendency which rapidly became general in the industry.

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[1] "The Inside History of the Carnegie Steel Company," by J. H. Bridge. Mr. Oliver, who was closely allied with the Carnegie interests, was at that time urging the purchase by them of several important iron mines.

It is not intended to say that this change in the policy of the Carnegie Steel Company (Ltd.) was a principal cause of consolidation in the steel industry. Instead, the new policy of that concern was as much a result of broad changes in underlying trade conditions as a cause of such changes. This new departure on the part of the Carnegie concern, however, unquestionably did tend to focus the attention of the industry as a whole upon the growing tendency toward concentration and integration, and thus gave that tendency a still further impetus. A special reason for this was the practical consideration that these acquisitions of the Carnegie Steel Company (Ltd.) gave it many strategic advantages which tended to force a similar policy upon its rivals in mere self-protection.

II. CONSOLIDATION MOVEMENT, 1898–1900.

Section 7. Phenomenal progress of consolidation in all industries in these years.

The rather general failure of pool agreements and the growing tendency toward integration both favored the progress of outright consolidation in the steel industry. In the late nineties this movement assumed phenomenal proportions. It was not, however, confined to the iron and steel industry, but was characteristic of practically all the leading industries of the country at that time. The proportions of this consolidation "craze," as it is sometimes termed, may be appreciated when it is stated that the authorized capitalization of industrial consolidations, exclusive of consolidations of steam railways, street railways, gas, electric lighting, and similar public-utility concerns, exceeded for the single year 1899 a total of $2,000,000,000.[1] This enormous figure, however, really gives only an inadequate idea of the extent of consolidation in that year, since other similar projects, representing in the aggregate a capitalization of over $1,000,000,000, were seriously undertaken, but finally abandoned or deferred, largely owing to unfavorable developments in the stock and money markets, which in turn were chiefly attributable to the enormous congestion of securities created in that year.

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[1] The Engineering and Mining Journal, in its issue of January 2, 1897, in reviewing the iron and steel market for 1896, said:

> The situation in the steel market is now practically that the Carnegie company controls its own supply of ore; controls at a fixed rate all the Lake transportation which it needs; has well advanced toward completion a railroad line of its own from the nearest Lake port to its Pittsburg mills, on which the cost of transportation will be reduced to a minimum, and finally, through its auxiliary, the H. C. Frick Company, controls the greater part of the output of the Connellsville coke region. With its enormous plant, to which all the latest improvements and economies have been added, and with its raw materials practically furnished at bare cost, this company is not only in a position to make steel cheaper than any other producer; it is so situated as to be absolutely in control of the market, and make the prices of steel what it will. We have had pools and combinations without number in the iron market in this country, but never before a position like this, in which a single company could absolutely dominate the trade, and make any combination which can be formed simply the register of its own wishes. The situation is not altogether a comfortable one, and many are looking anxiously for the result.

Section 8. Extent of consolidation in the iron and steel industry in these years.

The extent of consolidation in the iron and steel industry in the three years 1898–1900 was such as to transfer to less than a dozen concerns more than one-half of the steel-making capacity of the country, so far as primary products are concerned. Three important concerns—the Federal Steel Company (see p. 87), the Carnegie Company of New Jersey (a reorganization of the former Carnegie and Frick interests), and the National Steel Company (a merger of several crude steel manufacturers competing with the Carnegie and Federal concerns, chiefly in Ohio)—together secured probably not less than 45 per cent of the steel-ingot production of the country. Over 90 per cent of the wire and wire-nail business was transferred to a single concern, the American Steel and Wire Company of New Jersey.[2] A large percentage of the production of welded tubes and bridge fabrication was acquired by the National Tube Company and the American Bridge Company, respectively, while the American Tin Plate Company secured a practically complete monopoly of its branch of the industry. The greater part of the sheet-steel business was similarly transferred to a single organization, the American Sheet Steel Company, while a smaller combination, the American Steel Hoop Company, merged the leading makers of steel hoops and cotton ties. Mention may also be made of the Shelby Steel Tube Company, a consolidation of practically all manufacturers of seamless tubing. Besides these consolidations which, as shown later, were acquired by the United States Steel Corporation, several others were formed in the iron and steel industry at this time.

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[1] Journal of Commerce and Commercial Bulletin of December 30, 1899.

[2] This concern, as pointed out on page 91, was preceded by a smaller, but important, consolidation, the American Steel and Wire Company of Illinois.

Some idea of the extent of the consolidation movement in that industry, as well as the enormous issue of securities which accompanied it, is afforded by the following table, which gives the leading iron and steel consolidations and their stock and bond issues. For convenience, the concerns given in the table are segregated into those which were later merged into the United States Steel Corporation and those which were not. The authorized instead of the issued capitalization is given. In most cases practically the entire amounts of stock authorized were actually issued. A conspicuous exception occurred in the case of the Federal Steel Company, which issued only about one-half of its $200,000,000 stock. About $4,500,000 of each class of the stock of the American Bridge Company was unissued, and several millions in the case of the American Tin Plate Company, the American Sheet Steel Company, the Republic Iron and Steel Company, the United States Cast Iron Pipe and Foundry Company, and a few others. The exact amounts of stock issued by most of these concerns appear elsewhere in the report.

TABLE 1.—LEADING CONSOLIDATIONS IN THE IRON AND STEEL INDUSTRY, 1898-1900.

A. Consolidations later merged into the United States Steel Corporation. [1]

Name and year of organization.	Preferred stock.	Common stock.	Bonds.
1898.			
American Steel and Wire Company of Illinois [2]	$12,000,000	$12,000,000	
Federal Steel Company	100,000,000	100,000,000	[3] $30,217,179
American Tin Plate Company	20,000,000	30,000,000	[3] 273,000
1899.			
American Steel and Wire Company of New Jersey	40,000,000	50,000,000	[3] 130,656
American Steel Hoop Company	14,000,000	19,000,000	
National Steel Company	27,000,000	32,000,000	[3] [4] 2,561,000
National Tube Company	40,000,000	40,000,000	
1900.			
American Bridge Company	35,000,000	35,000,000	[3] 156,000
American Sheet Steel Company	26,000,000	26,000,000	[3] 2,000,000
Carnegie Company of New Jersey [5]		160,000,000	[6] 185,081,813
Shelby Steel Tube Company	6,000,000	9,000,000	
Total	320,000,000	513,000,000	220,419,648

[1] As noted in the text, in most cases practically all of the authorized securities were actually issued. The most conspicuous exceptions in this list were the Federal Steel Company, which issued rather less than $100,000,000 of stock; the American Bridge Company, which issued originally about $30,500,000 of each class; and the American Tin Plate Company, which retained in its treasury about $2,000,000 preferred and $2,000,000 common stock.

[2] This Illinois company was in 1899 merged into the New Jersey concern of the same name.

[3] Underlying bonds.

[4] Does not include $6,418,700 indebtedness incurred shortly after the organization of the company.

[5] This company was a consolidation of interests, most of which were previously affiliated and not competing.

[6] Including, in addition to the $160,000,000 bond issue of the Carnegie Company of New Jersey, $25,081,813 of underlying indebtedness, this including purchase-money obligations, and not merely bonds.

TABLE 1.—LEADING CONSOLIDATIONS IN THE IRON AND STEEL INDUSTRY, 1898-1900—Continued.

B. Consolidations not subsequently merged into the United States Steel Corporation.[1]

Name and year of organization.	Preferred stock.	Common stock.	Bonds.
1899.			
American Car and Foundry Company	$30,000,000	$30,000,000	....
American Iron and Steel Manufacturing Company [2]	3,000,000	17,000,000	....
Empire Steel and Iron Company [2]	5,000,000	5,000,000	....
National Enameling and Stamping Company	10,000,000	20,000,000	[3] $600,000
Pressed Steel Car Company	12,500,000	12,500,000	....
Republic Iron and Steel Company	25,000,000	30,000,000	....
Sloss-Sheffield Steel and Iron Company	10,000,000	10,000,000	[3] 3,835,000
United States Cast-Iron Pipe and Foundry Company	15,000,000	15,000,000	....
Virginia Iron, Coal and Coke Company	....	10,000,000	10,000,000
1900.			
Crucible Steel Company of America	25,000,000	25,000,000	....
Total	135,500,000	174,500,000	14,435,000

[1] Several of the concerns in this group had not issued the full amount of their capitalization. The most conspicuous instances were the National Enameling and Stamping Company, which had issued about $21,700,000 of its stock; the Sloss-Sheffield Steel and Iron Company, the issued stock of which was $14,200,000; and the Republic Iron and Steel Company, which retained in its treasury about $7,500,000 of its stock.

[2] The capitalization of these concerns was later reduced.

[3] Underlying bonds.

The companies here given are chiefly those producing crude steel and the less highly finished forms of iron and steel products, such as rails, beams, bars, nails, tin plate, sheets, and pipe. The table does not include a large number of consolidations in the machinery trade or similar branches of the industry—such, for example, as the American Bicycle Company, with $30,000,000 capital; the Otis Elevator Company, with $11,000,000 capital; the International Steam Pump Company, with $27,500,000 capital; the American Radiator Company, with $10,000,000; the United Shoe Machinery Company, with $25,000,000; not to mention many others of almost equal size.[1]

A discussion of the enormous overvaluation involved in these figures of capitalization is reserved for the later chapters. It is sufficient to point out here that the issues of securities greatly exceeded the value of the assets acquired. This is indeed shown by the mere statement that a very common practice in the organization of these concerns was to issue preferred stock up to the full appraised value of all the assets, including working capital, and in addition an equal amount of common stock as a bonus, over and above which also large amounts of stock—frequently millions of dollars—were often issued to the promoters of these consolidations for their "commission."

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[1] The figures of capital stock issues here given are the amounts authorized at the time these companies were organized. In most cases they have been increased.

Section 9. General causes of consolidation in the steel industry, 1898–1900.

While the failure of the various pools in the iron and steel trade to establish permanently effective control over the production and prices of iron and steel products was undoubtedly an important cause of outright consolidation as a surer method of restricting or eliminating competition, consolidation was not, however, resorted to for this purpose alone. The underlying causes of consolidation in the steel industry, which were substantially the same as those operating in other great industries, may be defined as follows:

1. The restriction of competition.
2. Integration; that is, the linking-up of productive processes through the acquisition, under one control, of raw materials and manufacturing plants (and in some cases transportation facilities), and through extensions and coordination of manufacturing processes.
3. The creation of a great amount of inflated securities.

The first of these causes, namely, the restriction or elimination of competition, was undoubtedly the most potent. Indeed, the organizers of some of these great consolidations have admitted that a desire to control or eliminate competition was the chief reason for their formation. This was undoubtedly true of many consolidations in the steel industry. The iron and steel business in the United States, taken as a whole, had been extremely profitable, but the acute and extended commercial depression which occurred in the middle nineties sharply reduced profits, and steel manufacturers were attracted to consolidation as a means of increasing their returns. At the same time, moreover, there occurred great changes in the organization of the industry and in conditions of production, which resulted in sharper competition, generally speaking, than had previously prevailed. It is true that the low prices in the iron and steel trade at this time were largely due to lower costs of production consequent upon the changes in the new conditions of production, particularly with respect to the production of the chief raw material—ore—and with respect to more economical methods of manufacture. Not all producers, however, had adjusted themselves to these new conditions, and, moreover, the advantages of these lower costs were largely offset by severe competition, so that as a whole there can be no doubt that profits in the industry at this period were comparatively low.

Under these conditions it was difficult to maintain pools. The fact that they were expressly prohibited by law, even though the law was not often appealed to, was a further source of weakness in such agreements. An outright consolidation of competing interests, however, promised to afford not only a surer means of restricting competition (and one perhaps less likely to be attacked in the courts), but at the same time to furnish other advantages.[1]

The second cause, namely, the integration of industry (that is, the opportunity of securing economies and commercial advantages through larger and more highly coordinated enterprises), also had considerable influence in the formation of certain types of consolidation. This was especially true in the steel industry, where such integration has been introduced to an exceptional degree, extending from ownership and production of the primary raw materials to the manufacture of the finished product, and involving extraordinary improvements in methods of operation. The rapid industrial development of the country and the decreasing charges for transportation combined in the late nineties to extend the available or accessible marketing areas of all manufacturing enterprises, and therefore favored a great increase in the scale of production. The technical conditions of production also encouraged the development of plants of great capacity, particularly the increasing substitution of machinery for hand labor; integration, moreover, made possible the introduction of other important economies.

It is worth pointing out that the technical economies of integration were chiefly connected with combining and coordinating the successive stages of manufacture, which resulted in the saving of fuel for reheating the metal, of labor and time in the moving or handling of material, and in the utilization of by-products, such as blast-furnace gas.

As distinct from economies thus brought about through such enlargement and coordination of plants, consolidation afforded a means for saving the payment of profits to others on the purchase of materials. A conspicuous illustration of such commercial advantage through integration is found in the acquisition by large iron and steel manufacturers of control of extensive reserves of raw materials—ore and coal. Whereas in the beginning of the nineties most manufacturers, as already stated, were largely dependent upon the open market for their requirements of ore, by the close of the decade, as a result of this change, the control of large ore reserves had come to be regarded as essential to successful continuance in the industry. The great bulk of the iron-ore deposits of the Lake Superior region had by 1900 passed under the control of less than a dozen interests, chiefly steel-making concerns. The most desirable coking-coal fields of the East had been secured, largely by the same steel-making interests, with almost equal rapidity.

One of the chief advantages to be gained was the saving of the payment of profits to others on such materials. In the case of ore in particular this was an important consideration because of the rather effective control of ore prices from time to time by ore pools. The acquisition of such supplies of raw material, and the accompanying saving of expense thereby by one interest practically forced a similar policy upon others. If certain manufacturers were independent of the producers of raw materials or intermediate products through the operation of their own ore and coal mines, and the production of their own coke, pig iron, and crude steel, etc., obviously such manufacturers as were not in an equally independent position were exposed to considerable danger if the prices of any one of these raw materials or intermediate products were raised to a high level. Under such circumstances they would be obliged to pay high profits to the producers of such raw materials or intermediate products, while they would have to compete in the sale of finished articles with other producers who were not at that disadvantage. Indeed, it might happen at times that there would be much difficulty in getting the needed quantities of materials or intermediate products at all. Thus, when the integration of the various stages of production is extended to include the mining of raw materials and transporting them to the manufacturing plant, the advantage from integration is usually commercial rather than technical.

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[1] However, as already pointed out, pool agreements were not entirely abandoned.

Of course, the saving of the profits thus accomplished ordinarily necessitated an additional investment on the part of these steel concerns. Aside from any saving of profits, moreover, the advantage of having the assurance at all times of a liberal supply of raw materials was in itself important.

The third cause above enumerated, namely, the opportunity to obtain profits from flotation of new securities, was undoubtedly a very important influence in the consolidation movement. Indeed, the proportions of this movement were largely determined by the opportunity to market the securities thus created. So long as the demand for such issues was maintained the supply was steadily increased.

The importance of this stock-market factor in the consolidation movement, whether in the iron and steel industry or in other industries, is too often overlooked. Consolidation, while in large measure an outgrowth of technical and industrial conditions, was by no means exclusively so. Instead, there was frequently a marked reluctance on the part of owners to dispose of the businesses which they had built up, and in many cases the controlling inducement to sell out was the enormous price obtainable in the securities of these great consolidations.

The profits from this source were of two kinds—first, those made by the manufacturers who took stock in the new consolidations for the property or businesses which they transferred; and, second, those made by the promoters of these companies. In most cases the profit depended upon the issue and sale to the public of stocks and securities of a par value greatly in excess of the aggregate values of the assets of the consolidations thus formed; in other cases, the fact that a consolidation was so comprehensive as to give a substantial monopoly in a particular branch of the business made it possible for the former owners to realize a liberal profit by retaining the inflated securities thus created, and receiving the dividends paid thereon.

The huge "commissions," so called, obtained by the promoters of some of these concerns are discussed elsewhere. They frequently amounted to millions of dollars. (See pp. 176–180.) Out of the proceeds of such stock commissions usually some organization expenses had to be met, but in the main these commissions were intended as compensation to the promoters of these consolidations. It should be noted that the size of these commissions frequently was fixed by the promoters themselves, since they determined the capitalization of the consolidated company.

Section 10. General description of principal consolidations subsequently forming the United States Steel Corporation.

For a satisfactory discussion of subsequent developments in the iron and steel industry, a brief description of some of the principal companies enumerated in the preceding section is desirable, especially those which, as indicated in Table 1, later constituted the United States Steel Corporation.

CARNEGIE COMPANY (OF NEW JERSEY).—This company was formed in March, 1900, as a reorganization and merger of the various Carnegie interests and the H. C. Frick Coke Company. (See p. 150.) It had an authorized capitalization of $160,000,000, and an authorized bond issue of the same amount. The new company did not go outside of this previously affiliated group of interests, and was, therefore, a reorganization rather than a consolidation, in the sense in which that word is commonly applied to many of the large corporations under discussion. The element of promotion was practically absent. The reorganization also resulted in a higher degree of integration. Among the more important subsidiary and allied concerns other than the H. C. Frick Coke Company were the Oliver Iron Mining Company, in which the Carnegie interests had by this time acquired a five-sixths share; the Pittsburg, Bessemer and Lake Erie Railroad, in which a majority stock interest was owned; the Union Railroad Company, operating a terminal railroad at Pittsburg; and various gas, water, and dock companies, as well as other miscellaneous interests.

The Carnegie Company was the largest single unit in the steel industry in the period under discussion. All of its manufacturing properties were concentrated in or near Pittsburg, this compactness of plant being a conspicuous feature of its organization. Its great size had been attained chiefly by an expansion of its own plants, or by the addition of concerns in correlated industries, such as coal and transportation, rather than by the absorption of competitors. An important exception to this general statement, however, was the acquisition of the Duquesne works. The company was noted for the efficiency of its management, its financial strength, and conservative policy with respect to the reinvestment of profits in the business, and by the fact that its securities were not publicly on the market, but held by a comparatively few individuals who had long been identified with the active conduct of the business. The company was, in fact, a close corporation, with practically no outside affiliations.

The Carnegie interests had by the beginning of 1900 become very strongly entrenched with respect to the reserves of all the principal raw materials. The company had assured itself of a long-time supply of very desirable ore in the Lake region. Most of its acquisitions had been acquired by lease and had involved comparatively small initial outlay, the bulk of the cost being paid in yearly installments in the form of royalties (see p. 216) as the ore was actually produced. With respect to coal and coke property the Carnegie interests—through the H. C. Frick Coke Company—had made very extensive purchases long before the era of consolidation. On the reorganization of the Carnegie interests in 1900 the H. C. Frick Coke Company held 40,000 acres of coking coal lands in addition to a large amount of surface land, about 11,000 coke ovens, aside from a large amount of mine equipment, dwellings, and miscellaneous property. The coking coal lands owned by the Frick company formed one of the most valuable assets of the Carnegie concern. The Carnegie Company also had very valuable natural-gas properties in the vicinity of Pittsburg.

While the company did not control the transportation of its ore by rail from mines to the head of the Lakes,[1] as did the Federal Steel Company, it acquired a fleet of six Lake ore vessels in 1899, and rapidly added others so that by the end of 1900 it was in a position to transport a very considerable part of its ore down the Lakes in its own boats. Moreover, as early as 1896, the Carnegie interests had acquired the Shenango and Lake Erie Railroad, running from Conneaut to Pittsburg, and also the Butler and Pittsburg Railroad, then under construction, both of which were consolidated in the latter part of 1896 as the Pittsburg, Bessemer and Lake Erie Railroad.

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[1] The Carnegie interests appear at one time to have contemplated the construction of a railroad of their own from some of their mines on the Mesabi Range to the head of the Lakes. In the late summer of 1899 they organized the Virginia-Ely Railroad Company under Minnesota laws. The project was, however, soon abandoned, apparently as the result of further contracts made by the Carnegie concern with the Rockefeller interests for a supply of ore and also for the transportation of ore to lower Lake points. These contracts, it should be noted, were quite distinct from the important arrangement of a similar character made between the same interests in 1896, as already described. (See p. 76.)

Immediately upon the acquisition of these railroads, the Carnegie interests virtually reconstructed them with a view to effecting the transportation of ore at a minimum cost. The size of the equipment, both engines and cars, was enormously increased, bridges were strengthened, and the road in large measure rebuilt. The most modern methods of unloading ore from steamers to cars at the docks and from the cars to furnaces at Pittsburg were introduced. The result was a very pronounced increase in the average train load and a marked reduction in transportation and handling costs per ton.

It is worth repeating that the Carnegie interests long before this had owned the Union Railroad, a belt line in the Pittsburg district, which added greatly to the efficiency of their plants.

The chief business of the Carnegie concern[1] was the manufacture of heavy steel products, such as steel rails, plates, axles, structural steel and bridge material, and various kinds of crude steel for the trade. Its annual capacity of ingots was about 3,500,000 tons and its capacity of finished products rather more than 3,000,000 tons, thus placing the company well in advance of its largest competitor, the Federal Steel Company, with respect to size. Its ingot production in 1900 was about 18 per cent of the country's total. It conducted every stage in the manufacture of its various products from the production of the raw materials up. Generally speaking, the Carnegie interests, up to the date of the organization of the New Jersey company, had confined themselves largely to the manufacture of heavier steel products of the character just described. Many of its best customers were manufacturers of finished steel, such as wire products, tubular goods, tin plate, and sheet steel. The company was, however, in a position to engage at short notice in the manufacture of more highly finished products, a fact which, as shown later (see p. 104), proved to be an exceedingly important consideration in bringing about the organization of the United States Steel Corporation.

FEDERAL STEEL COMPANY.—This company was formed in September, 1898, with $200,000,000 authorized capital stock (of which about $100,000,000 was issued). It was a merger, through stock purchase, of the Illinois Steel Company, operating several large steel plants in or near Chicago and another at Milwaukee; the Minnesota Iron Company, which had extensive ore properties on the Vermilion Range and which also owned the Duluth and Iron Range Railroad and the Minnesota Steamship Company, thus providing for the transportation of its ore from mines to lower Lake ports; also, the Lorain Steel Company and the Johnson company (of Pennsylvania), with plants at Lorain, Ohio, and Johnstown, Pa. The consolidated company also acquired the stock of the Elgin, Joliet and Eastern Railway, a line of some 180 miles intersecting practically every railroad entering Chicago. This road directly served the Joliet works of the company and afforded connections with its other plants. The Illinois Steel Company itself also controlled a railroad, the Chicago, Lake Shore and Eastern, which connected its various plants in and about Chicago.

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[1] The Carnegie Company of New Jersey was a holding company. At its organization the properties of the old Carnegie Steel Company (Ltd.) were placed under the control of a new concern, the Carnegie Steel Company of Pennsylvania. For convenience in the discussion here given, these intercompany relationships are ignored.

The Federal Steel Company, like the Carnegie Company of New Jersey, was a holding company. Although a combination, the chief object of its formation apparently was not so much to eliminate competition as to secure an organization which should to a large extent be independently situated with respect to ore, fuel, and transportation, as well as manufacturing plants.[1] Moreover, while the two principal constituent concerns, the Illinois Steel Company and the Minnesota Iron Company, had been officially independent of each other, their securities had to some extent been owned by the same persons, so that the consolidation was really a welding of what might be called friendly rather than hostile interests.

The similarity between the Federal Steel Company and the Carnegie Company extended to the character of their output, the principal products of the Federal concern being steel rails, billets, plates, structural shapes, and other heavy lines and, like its Pittsburg rival, many of its best customers were themselves steel manufacturers. The annual ingot capacity of the company at the time of its organization was placed at about 2,000,000 tons. Its production, however, was considerably less, but represented about 15 per cent of the country's total at the date of its organization.

It will be noted that the Federal Steel Company's manufacturing properties were rather widely scattered, the company having plants at Milwaukee, Wis., Chicago and Joliet, Ill., Lorain, Ohio, and Johnstown, Pa. In this respect it differed sharply from the Carnegie concern, all of the manufacturing properties of which were compactly located in the Pittsburg district.

The extensive coal and ore properties brought into the consolidation by the constituent concerns were steadily added to by the Federal Steel Company management, and in numerous other ways the policy of integration which was already marked was carried further. Through the Illinois Steel Company it acquired some additional ore land in the Lake region and a considerable tract of coking coal land in the Connellsville district.

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[1] In this connection the following excerpt from the first annual report of the company may be cited:

> The plan is to own and control sufficient iron ore, coal, coke, and limestone and other raw products to supply all of the mills of the constituent companies; to own and control adequate facilities for transportation both on land and water; to manufacture and deliver finished steel, and to transact all business in connection with the same with the greatest economy.

With respect to transportation facilities, it is apparent that the Federal Steel Company was exceptionally well situated. Aside from owning the Duluth and Iron Range Railroad for the transportation of its ore from mines to the head of the Lake, the operation of the company's various properties was greatly facilitated by its ownership of other railroad properties, particularly the Elgin, Joliet and Eastern. Through the Minnesota Iron Company, moreover, the Federal Steel Company, at its organization, secured a fleet of 9 steel steamers and 7 steel barges, thus making the company largely independent of outside vessel interests for the transportation of ore on the Lakes.

National Steel Company.—This company, formed in February, 1899, with $59,000,000 capital stock, all but $1,000,000 of which was issued at the time, ranked next in size to the Carnegie Company and the Federal Steel Company. It was a consolidation of several large concerns, chiefly in Ohio, making crude steel and heavy steel products; it also acquired two important furnace companies. It had the bulk of the crude-steel capacity in the territory immediately west of Pittsburg, other than that owned by the Federal Steel Company. While similar to the Federal and Carnegie companies in the character of its output, the National Steel Company differed from these in that it was distinctly a combination of previously competing concerns. A heavy stock bonus to the promoters was another conspicuous feature of its organization. The company was organized by W. H. Moore, who had also promoted the American Tin Plate Company, and who, prior to carrying through that deal, had never been prominently identified with the iron and steel industry.

The company's total annual pig-iron capacity in 1899 was in the neighborhood of 2,000,000 tons, and its capacity for steel about 1,700,000 tons. Its output of crude steel was about 12 per cent of the country's total. Its production was largely confined to semifinished steel, such as billets, sheet bars, and tin-plate bars, rather than finished products, even in the heavier lines. The company had a ready market for its steel production in these cruder forms because of its close affiliation with the American Tin Plate Company and the American Steel Hoop Company, and also with the American Sheet Steel Company, organized in 1900, all so-called "Moore concerns." The last three companies, and particularly the Tin Plate and the Sheet Steel companies, depended largely upon the National Steel Company for their raw material.

Through the Ohio Steel Company, one of its constituent concerns, the National Steel Company secured a one-fourth interest in a lease of the Biwabik mine, on the Mesabi Range. Shortly after its organization the consolidated company bought the Chapin mine, a valuable and extensive property, and also the Winthrop, these purchases including 9 ore steamers. It also acquired furnace and coke property from the Oliver & Snyder Steel Company, and, in addition, a twenty-year contract for a one-sixth interest in the ore production of the Oliver Iron Mining Company, the other five-sixths being secured by the Carnegie interests through ownership of a similar proportion of the stock of the Oliver concern. (The National Steel Company did not acquire any interest in the Oliver company's stock.) Thus, at the outset, the company adopted a vigorous policy of integration. In fact, integration was carried by this company to a point which fairly put it in the same general class with the Carnegie Company and the Federal Steel Company.

Furthermore, the close relationships among the four "Moore" companies gave the group as a whole a further degree of integration, particularly with respect to finished lines; that is to say, these companies as a group carried the production of steel into more highly elaborated forms than even the Carnegie or Federal concerns.

American Tin Plate Company.—The American Tin Plate Company typifies that class of consolidations which were distinctly lacking from the standpoint of integration of productive processes, and which were primarily designed to control or eliminate competition in the sale of products. The element of promotion profits was also a conspicuous feature of its organization, no less than $10,000,000 of its $46,325,000 issued stock going for this purpose. (See p. 178.)

The tin-plate industry had had a phenomenally rapid growth, largely owing, no doubt, to the heavy import duty placed upon tin plate in the McKinley tariff. Indeed, the industry developed so rapidly that by the late nineties the country's output was practically sufficient for the home market.[1] This great increase in production was followed by extremely severe competition and sharp reductions in prices. The leading officers of the American Tin Plate Company, in subsequent testimony before the Industrial Commission, made no secret of the fact that a desire to restrict competition was largely responsible for its organization.

As already stated, the company was organized by W. H. Moore in the latter part of 1898. It acquired 39 different plants, embracing altogether 279 mills. This comprised almost every concern making tin plate at the time, and the new company had a closer approach to monopoly than did any other large steel consolidation; indeed, it may fairly be termed a monopoly so far as the industry in this country was concerned.

The policy of eliminating competition was still further manifested by negotiations undertaken by the company almost immediately after its formation to control the supply of tin-plate machinery, with a view of preventing the construction of independent tin-plate mills. In this it was not altogether successful. A number of independent concerns were started; several of these, however, were speedily bought up by the consolidated company, which, for several years, maintained not only a dominating, but substantially a monopolistic position in its branch of the steel industry.

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[1] Occasional exports of tin plate had, indeed, been made; on the other hand, some foreign tin plate was still sent to the Pacific coast, the relatively low rate by sailing vessel enabling British makers to compete in that section with the American product.

The company made practically a single product—tin and terne plate. As just shown, it purchased the semifinished steel which it needed, largely from the National Steel Company, with which it was closely affiliated through more or less common management.

American Steel Hoop Company.—This company was organized in April, 1899, with $33,000,000 capital stock, all issued. It was primarily a combination of previously competing concerns, and a desire to limit competition and afford a large profit to the promoters was undoubtedly the ruling motive in its organization, which was conducted by W. H. Moore, together with other interests. The company was a consolidation of 9 concerns operating blast furnaces and rolling mills; its principal products were iron and steel bars, hoops and bands, cotton ties, and iron skelp. It was comparatively small, with an annual output of about 700,000 tons of finished product, exclusive of some surplus pig iron.

Shortly after its organization the company strengthened its position by the acquisition of important ore and coke supplies. As previously stated, it was closely affiliated with the National Steel Company.

American Sheet Steel Company.—This corporation, organized early in 1900, was also one of the group of " Moore " steel companies.[1] It had $52,000,000 authorized capital stock, of which $49,000,000 was issued. It was virtually a counterpart of the American Tin Plate Company, in that it was organized to consolidate previously competing concerns, and in that it was engaged in the manufacture of practically a single product—sheets. Its annual capacity was in the neighborhood of 500,000 tons, this representing about 70 per cent of the country's total capacity at the time of its organization. The element of integration was hardly present in its case.

American Steel and Wire Company of New Jersey.—This company also falls in that class of consolidations which were chiefly due to a desire to restrict competition and to realize a large promotion profit. The collapse of the wire nail pool in the latter part of 1896, as already pointed out, was followed by sharp price reductions, which promptly led to new efforts to effect a combination in the industry along more permanent lines. In March, 1898, several of the larger wire concerns were merged into a $24,000,000 concern—the

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[1] The Moore interests subsequently organized the American Can Company. This was not acquired by the United States Steel Corporation.

American Steel and Wire Company of Illinois. Within a year this company was consolidated with most of the outside wire makers into the American Steel and Wire Company of New Jersey, with $90,000,000 of capital stock, all issued.

The company's chief products were wire nails, plain wire, barbed wire, and wire fencing. It had a rod-mill capacity of something over 1,100,000 tons and a capacity for wire nails of rather more than 10,500,000 kegs.[1]

The company at its organization produced a part of its requirements of pig iron and crude steel, so that it enjoyed some degree of integration from the start. It immediately strengthened its position in this respect by the acquisition of extensive ore properties in the Lake region and considerable coking-coal and other coal land in Pennsylvania. One iron-ore mine alone, the Sauntry, was estimated to contain anywhere from 25,000,000 to over 75,000,000 tons. In a listing application submitted to the New York Stock Exchange in August, 1899, or about six months after its organization, the company estimated its reserve supply of coking coal to be at least 125,000,000 tons. Several hundred coke ovens were then in operation and more under construction. Somewhat later the company acquired an important fleet of vessels on the Great Lakes. (See p. 131.)

National Tube Company.—This company, formed in June, 1899, with $80,000,000 capital stock, all of which was issued, owed its organization chiefly to a desire to restrict competition and to the activity of promoters. It was a merger of 13 concerns. The largest of these was the National Tube Works Company, which had built up very comprehensive plants at Pittsburg and McKeesport, comprising blast furnaces, steel works, and rolling mills. (See p. 142.) The Riverside Iron Works, another large concern also acquired, had plants at Wheeling and Benwood, W. Va., and Steubenville, Ohio. It also owned considerable coking-coal property. Most of the other constituent concerns were smaller.

The principal product of the company was iron and steel wrought tubing. Its aggregate capacity was officially given in a listing statement to the New York Stock Exchange in February, 1900, at over 1,000,000 tons, or about 90 per cent of the country's total. It appears, however, that this was an overstatement, and that its proportion was perhaps not over 75 per cent. As shown later, the company was exceptionally successful, and this notwithstanding the fact that it did not carry the policy of integration as far as did some of the other large consolidations just described. While affiliated through banking connections with the Federal Steel Company (see p. 105), the location of most of the National Tube Company's plants was such that it depended very largely upon the Carnegie Company for a supply of the semifinished steel products which constituted its raw material. Later, however, the company planned to make itself more independent in this respect by the construction of additional steel plants and rolling mills for the production of semifinished steel. This change in policy, as shown later, had an important bearing upon the organization of the United States Steel Corporation. (See p. 103.)

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[1] Iron Age, January 12, 1899, page 21.

AMERICAN BRIDGE COMPANY.—This company, with $70,000,000 authorized capital stock, of which about $63,000,000 was issued, falls in the same general class as the American Tin Plate Company, the American Sheet Steel Company, the American Steel and Wire Company, and the National Tube Company, in that it was a consolidation of previously competing concerns. The plants entering the combination were unrelated units dependent upon the larger steel manufacturers for the steel which constituted their raw material, and the company was conspicuously undeveloped from the standpoint of integration of productive processes. It was concerned with a specialty; that is, as the name indicates, the erection of bridges. It also engaged extensively in the erection of steel construction for buildings. Its annual capacity was about 600,000 tons. It did not have as high a degree of control as some of the other consolidations here discussed.

The American Bridge Company, through banking connections, was affiliated with the Federal Steel Company and the National Tube Company, these three concerns often being spoken of as "Morgan" companies. There was no such marked affiliation from a manufacturing standpoint, however, as noted in the case of the "Moore" companies. This, as just shown, was partly due to the western location of the principal steel works of the Federal Steel Company, which made it impracticable to supply the Tube and Bridge concerns with their requirements of steel in competition with the Carnegie Company and other eastern concerns.

SHELBY STEEL TUBE COMPANY.—This company, capitalized at $15,000,000, was a consolidation of practically all the important concerns engaged in the manufacture of drawn or seamless tubing. A preliminary consolidation of several seamless-tube companies was formed in 1897 under a Pennsylvania charter; the new concern claimed to have about 90 per cent of the country's output at that time. In 1899 several other concerns were acquired, and in 1900 the company was reorganized under New Jersey laws. The company, it will be seen, manufactured a specialty, and it depended on other steel concerns for its supply of crude steel. In its own field it had for a time a substantial monopoly. Later the National Tube Company took up the manufacture of seamless tubing, and apparently cut into the business of the Shelby concern heavily.

LAKE SUPERIOR CONSOLIDATED IRON MINES.—This company, organized in 1893, was largely owned by Standard Oil capitalists. Its outstanding capital stock in 1901 was about $29,400,000, all of one class. It was not engaged in manufacturing in any way, but was simply an ore-producing and transportation concern. It was virtually the counterpart of the Minnesota Iron Company in that it had extensive holdings of valuable iron-ore properties and an important ore-carrying road—the Duluth, Missabe and Northern. The controlling interest in this company, furthermore, was the owner of the largest fleet of ore vessels on the Great Lakes. (See p. 149.) As shown above, the company in 1896 entered into a very important ore contract with the Carnegie Steel Company (Ltd.). On account of its vast holdings of ore and its large transportation interests, the Lake Superior Consolidated Iron Mines occupied an exceedingly important position in the ore industry, and one which enabled it to secure favorable terms from the United States Steel Corporation when it was acquired by that concern in 1901.

Section 11. Other principal consolidations and companies in the steel industry.

Aside from the companies discussed in the preceding section, which were later acquired by the United States Steel Corporation, a number of other important consolidations in the steel industry were, as shown in Table 1, on page 81, organized in the late nineties. The more important of these concerns engaged in the manufacture of primary products were the Republic Iron and Steel Company and the Sloss-Sheffield Steel and Iron Company.

Republic Iron and Steel Company.—This company, incorporated in New Jersey in May, 1899, with $47,500,000 issued stock was a consolidation of iron rolling mills chiefly in Ohio and Indiana; it also took in some plants in the Birmingham district. In all it included 5 blast furnaces and about 30 rolling mills. Its capacity of bar-iron and rolled-iron products at its organization was approximately 1,000,000 tons.

The primary object of this consolidation was restriction of competition. A large stock bonus to the promoters was also a feature of its organization. However, the company even at its formation showed some degree of integration. Through subsidiary concerns it acquired several iron mines in the Lake Superior district, as well as coke property in the Connellsville region. It also had some southern ore and coal properties. Shortly after its organization a vigorous policy of concentration was adopted. A large number of rolling mills which were poorly equipped or badly located were dismantled and abandoned, and in their stead the company erected a large steel plant, at Youngstown, Ohio.

Sloss-Sheffield Steel and Iron Company.—This company, incorporated in August, 1899, was a consolidation of blast furnaces at

Sheffield, Birmingham, and Florence, Ala. The chief motive of its organization was a desire to secure greater integration and particularly to obtain control of additional coal and ore properties. The company dealt extensively in steam coal. It also had a large number of coke ovens, with an annual capacity of over 350,000 net tons; its pig-iron capacity (gross tons) was about the same. The company has never manufactured steel. The authorized capital stock of the company was $20,000,000, of which about $14,200,000 was issued.

Section 12. Expansion by older iron and steel concerns.

Concurrently with this organization of great consolidations, there occurred a reorganization and expansion of several other large concerns in the iron and steel industry. The more important instances of this sort are summarized in the following table:

TABLE 2.—REORGANIZATIONS AND EXPANSIONS OF IMPORTANT IRON AND STEEL COMPANIES NOT NEW CONSOLIDATIONS, 1898–1900.

Company.	Authorized capitalization just after time of readjustment.		
	Preferred stock.	Common stock.	Bonds.
Cambria Steel Company		[1] $50,000,000	
Colorado Fuel and Iron Company [2]	$2,000,000	23,000,000	[3] $6,950,000
Jones & Laughlins (Ltd.) [4]		20,000,000	
Lackawanna Iron and Steel Company [5]		25,000,000	
Pennsylvania Steel Company	25,000,000	25,000,000	[6] 7,000,000
Tennessee Coal, Iron and Railroad Company	1,000,000	23,000,000	12,603,000

[1] The original company of this name was incorporated in 1898 with a capital of $16,000,000 to lease the Cambria Iron Company. The company was reorganized with the above authorized capital in 1901.

[2] This company was incorporated in 1892. In 1899, however, it effected a rearrangement of its finances, its capitalization being increased to the figures shown above. Since then there has been a further increase in capitalization.

[3] Including underlying bonds.

[4] This company, which was organized in April, 1900, to succeed the former partnership, became in August, 1902, the Jones & Laughlin Steel Company, with a capital of $30,000,000 and an authorized bond issue of $10,000,000. The bond issue was subsequently increased.

[5] This company was an expansion of the Lackawanna Iron and Steel Company, of Pennsylvania, capitalized at $3,750,000. In February, 1902, this company was succeeded by the Lackawanna Steel Company of New York, with an authorized capital of $40,000,000, which was later increased to $70,000,000. The new company also has a large bonded debt.

[6] Underlying bonds.

Owing to the importance of these companies, brief mention of their organizations and operations may be made at this point.

JONES & LAUGHLINS (LTD.).—The two partnerships of the Jones & Laughlin interests noted on page 64 were in 1900 consolidated as Jones & Laughlins (Ltd.), with a capital stock of $20,000,000. The company was at this time a large manufacturer of billets and other crude steel, and the heavier classes of finished products, such as bars, plates, angles, and certain special lines. The company has since greatly expanded the volume and the scope of its business and has carried the policy of integration to an advanced point, until to-day it is perhaps the most important factor in the steel industry outside of the United States Steel Corporation.

LACKAWANNA IRON AND STEEL COMPANY.—The Lackawanna Iron and Steel Company in the latter part of 1899 determined to build a large plant on Lake Erie, near Buffalo, and in December of that year increased its capital stock from $3,750,000 to $25,000,000. In 1902 the Lackawanna Steel Company (of New York) was formed as the central concern with a capital stock of $40,000,000, since increased to $70,000,000, about half of which amount is issued; the company has also issued a large amount of bonds. The company manufactures all the heavier forms of steel, such as rails, bars, and beams, and it also has various finishing mills for lighter rolled products. It has extensive holdings of ore and coal property.

PENNSYLVANIA STEEL COMPANY.—In the early part of 1901 this company (see p. 64) was reorganized under New Jersey laws with an authorized capital of $50,000,000, of which $16,500,000 preferred and $10,750,000 common stock were issued. At this time a controlling interest in the company was acquired by the Pennsylvania Railroad. The company greatly extended its operations, a special feature being the acquisition of the very important Cuban ore property of the Spanish American Iron Company.

CAMBRIA STEEL COMPANY.—This concern was organized in 1898, with a capital stock of $16,000,000, to lease the property of the Cambria Iron Company (briefly described on p. 65) for a period of 999 years. Still later there was a further reorganization and increase in capitalization. The company later materially expanded its manufacturing operations. Its ore is chiefly derived from the Lake region, where it has important reserves.

TENNESSEE COAL, IRON AND RAILROAD COMPANY.—This company, which, down to 1898, was concerned with the operation of coal properties and the manufacture of pig iron, in that year began the construction of a steel plant at Ensley, Ala., for the manufacture of basic open hearth steel. A large increase in its investment was made at that time. The issued capital stock of the company in 1900 was about $23,000,000 and there was a bonded indebtedness of about $12,000,000. As noted elsewhere, in 1907 the Tennessee Coal, Iron and Railroad Company was acquired by the United States Steel Corporation, but at the period now under discussion it is properly grouped with the so-called "outside" steel companies. One of the most important assets of the company was its extensive ore property.

COLORADO FUEL AND IRON COMPANY.—The organization of this company has been sufficiently described on page 64. In 1899 the company greatly expanded its operations by the construction of a new

Bessemer steel plant, open hearth steel works, and finishing mills for the production of a large variety of steel products. At this time its authorized capital stock was increased from $13,000,000 to $25,000,000. In recent years the capitalization has been increased and the plants have been still further enlarged. As already pointed out, the company has important ore and coal properties.

Section 13. General tendency of leading concerns in the steel industry to secure greater integration.

From what has been said, it is apparent that as a rule the great iron and steel concerns, particularly those making crude and semifinished steel, were all striving at the close of the nineties thoroughly to fortify themselves for the future by acquiring liberal reserves of the two great raw materials, ore and coking coal, and by the erection of additional manufacturing plants. Moreover, several concerns which made more elaborated products, and which at their organization were wholly dependent upon other steel makers for their supplies of crude and semifinished steel, were also following the lead of these larger companies.

It is obvious that the Carnegie Company was in an exceptionally strong position. With respect to the expansion and coordination of manufacturing processes this company probably led all its rivals, the efficiency of its organization being a byword in the trade. Its reserves of ore were enormous and its holdings of coking-coal property far exceeded those of any other steel concern. It had an important advantage from the standpoint of transportation over most of its rivals in the Pittsburg district. It is true that the company did not have its own railroad transportation facilities for ore in the Lake region. The Carnegie concern, was, however, rapidly becoming independent with respect to the transportation of ore on the Great Lakes.

The Federal Steel Company, as shown, was also a very highly integrated concern, controlling not only the production of ore but also its transportation by rail to the head of the Lakes and by vessel to its principal manufacturing plants (those at Chicago, Ill., and Lorain, Ohio). It also had other extensive railroad facilities and a large amount of coking-coal property. The arrangement of its manufacturing properties was somewhat less compact than those of the Carnegie Company. However, it had some advantage in reaching western markets by reason of its Chicago location.

The National Steel Company, the central organization of the "Moore" group, while distinctly behind either the Carnegie Company or the Federal Steel Company, nevertheless, it will be seen, had, by the acquisition of ore and coal reserves and a fleet of ore vessels, attained a position of marked independence which it was steadily strengthening.

Furthermore, the close affiliations of this concern with the other "Moore" companies—the American Tin Plate Company, the American Sheet Steel Company, and the American Steel Hoop Company—tended to round out the operations of the group as a whole, and by assuring the National Steel Company of a market for practically all of its output of crude steel and pig iron it added a decided element of strength. While any one of these "Moore" concerns alone, with the exception of the National Steel Company, would have been distinctly vulnerable, their close affiliations made the group as a whole a very formidable factor in the industry.

These three concerns—the Carnegie Company, the Federal Steel Company, and the National Steel Company—were by far the most important and most strongly intrenched factors in the steel industry so far as those companies which later made up the Steel Corporation are concerned. Several of the crude-steel making companies which did not later enter the Steel Corporation were also well integrated. The location of some of these, however, or the character of their business, placed them in a rather different class than the companies just described.

Integration had, moreover, been carried to a considerable distance by the American Steel and Wire Company and a few of the other consolidations making the lighter steel products, but these companies were not in the same class in this respect with the larger concerns just referred to.

As shown in the following section, the marked degree of integration and concentration effected by large steel companies in the late nineties and the lack or incompleteness of integration by some of the other concerns had an exceedingly important bearing upon the formation of the United States Steel Corporation.

III. ORGANIZATION OF THE UNITED STATES STEEL CORPORATION IN 1901.

Section 14. Fundamental causes of this consolidation.

The fundamental causes of the formation of the United States Steel Corporation were substantially the same as in the case of the earlier consolidations described above, namely, (1) restriction or prevention of competition by combination; (2) integration; (3) stock inflation.

While in the case of the several consolidations thus far considered all three of these causes were not invariably present, all of them were factors in the organization of the Steel Corporation, and the same processes already described were repeated there in a more comprehensive manner and on a vaster scale.

The restriction of competition was the controlling motive in the organization of the Steel Corporation. While competition had already been greatly restricted in certain branches of the steel industry, a striking result of the consolidation movement above described was that competition was not thereby destroyed. Instead it soon developed that the formation of these great consolidations was likely to bring on an era of competition more severe than any the industry had yet experienced. This unforeseen outcome of consolidation, as explained below, was largely due to the tendency of these great consolidations to secure greater integration and thus to make themselves practically independent in all stages of production from the ore up.

The economies and commercial advantages rendered possible by integration through a still greater merger were also considerable, and, moreover, furnished a convenient argument in attempts to justify the merging of these competing concerns. (See p. 108.)

The third factor, namely, the inflation of securities, was also extremely important. The upward swing of trade and industry in the United States had not exhausted its vigor, and the business world was still ready to support vast commercial and financial undertakings.

There was thus brought about a temporary conjunction of conditions in the industry which presented an extraordinary inducement to prevent a bitter commercial conflict, and at the same time a remarkable opportunity to organize a consolidation which promised to yield unexampled profits from the flotation of an enormous amount of watered stock.

For a clear understanding of the real significance of the organization of the Steel Corporation, it is necessary to describe the situation in some detail.

Position of the steel industry.—The preceding discussion has shown that a remarkable condition had been reached in the iron and steel industry by the close of the year 1900. In the first place, the manufacture of crude and semifinished steel was largely in the hands of a comparatively few great concerns. The manufacture of several of the more finished lines, such as wire and wire products, tin plate, sheets, and tubes, moreover, had been substantially transferred to another group of consolidations, each of which with few exceptions had a more or less monopolistic position. These latter concerns were in great measure dependent upon the larger steel makers for a supply of their raw material, namely, semifinished steel. The larger steel concerns, on the other hand, were chiefly engaged in the manufacture of crude and semifinished steel or of heavier finished steel products, such as rails and structural material, which did not bring them directly in conflict with the group of concerns making the more elaborated products.

The relationships of the companies in these two groups to one another have already been partly indicated in the preceding discussion. These relationships had, however, such a vital bearing upon the organization of the Steel Corporation that they may be briefly summarized at this point.

The large consolidations which were subsequently merged into the Steel Corporation may be conveniently grouped in two classes—(1) the "primary group," or those making chiefly semifinished steel and heavy steel products, and (2) the "secondary group," consisting of those making lighter and more elaborated products.

The primary group of companies comprised the Carnegie Company, the Federal Steel Company, and the National Steel Company. Of these, the Carnegie Company was, of course, the most important. As already shown, it was a highly integrated concern, completely independent as to the production of its raw materials, and also pig iron and crude steel. It also had very important transportation facilities. The company, however, depended to a considerable extent for the marketing of its semifinished steel products (which comprised a very large portion of its total output) upon other steel manufacturers, who used such semifinished steel as their raw material. Some of its most important customers, in fact, were concerns in the second group of consolidations just noted.

The Federal Steel Company was in much the same general position as the Carnegie Company, being very thoroughly integrated, with extensive holdings of iron-ore and coking-coal lands, and with even more important transportation facilities. A rather larger proportion of its crude steel was worked up into finished forms (chiefly heavy lines) than in the case of the Carnegie Company; nevertheless, the company depended upon other steel manufacturers for an outlet for a part of its production.

The National Steel Company, while thoroughly integrated with respect to raw materials, was almost entirely dependent upon other manufacturers for a market for its steel, which, as already shown, consisted chiefly of such semifinished products as billets, sheet bars, and tin-plate bars. This company, however, had a ready market for the bulk of its steel products, because of its close affiliation with the other so-called "Moore" concerns, the Tin Plate, Sheet Steel, and Steel Hoop companies.

It is obvious, therefore, that all three of these steel-making concerns, despite their great size, were in a measure dependent upon other manufacturers.

A very important concern closely connected with this primary group of steel-making companies was the Lake Superior Consolidated Iron Mines, controlled by Standard Oil interests. This company had enormous holdings of ore in the Lake region, as well as a very important ore railroad to upper Lake ports—the Duluth, Missabe and Northern. Moreover, as previously stated, the controlling interests in this concern also controlled the Bessemer Steamship Company, which owned the largest fleet of vessels on the Great Lakes. These interests were not engaged in steel manufacture in any way.

The principal concerns in the secondary group were the American Steel and Wire Company, the National Tube Company, the American Tin Plate Company, the American Sheet Steel Company, the American Steel Hoop Company, and the American Bridge Company.

The American Steel and Wire Company, it will be remembered, originally had a substantially monopolistic control of the production of wire products in the United States. Its position with respect to its chief raw material, namely, steel billets, was not nearly so strong. Instead it purchased a very large proportion of its billet requirements. While the subsequent efforts of the company toward further integration through purchases of iron-ore and coking-coal properties, and the erection of additional blast furnaces, considerably improved its position in this respect, nevertheless it was not thoroughly integrated in 1900, and was still very largely dependent upon the large steel makers. However, it contemplated carrying the processes of integration much further by the erection of additional steel works of large capacity.

The National Tube Company, which at its organization acquired about 75 per cent of the production of iron and steel wrought tubing in the United States, was only partially integrated. While two of its principal plants, those of the old National Tube Works Company and of the Riverside Iron Works, embraced blast furnaces, steel works, and rolling mills (the Riverside concern, moreover, having considerable coking-coal property), the company nevertheless bought a large amount of its requirements of semifinished steel in the open market.

The American Bridge Company was not only somewhat weaker with respect to its control of its particular branch of the steel industry, but was almost entirely dependent upon other producers for its principal raw material—structural steel.

The American Tin Plate and the American Sheet Steel companies, both of which were "Moore" concerns, had a very high degree of control of their respective branches of the steel industry, particularly the Tin Plate concern, which, it will be remembered, originally enjoyed an almost complete monopoly of the production of tin plate. Neither of these concerns was integrated to any important extent; however, through their close affiliation with the National Steel Company, another "Moore" consolidation, they were well protected with respect to the requirements of their raw materials—sheet bars and tin-plate bars. The weakness of these concerns when considered individually was, therefore, partly made up through this close relationship with the National Steel Company.

The American Steel Hoop Company (also a "Moore" concern) was partially integrated at its organization, having a number of blast furnaces and steel works, in addition to its hoop mills; moreover, as already shown, the company after its organization acquired some iron-ore and coking-coal property. The affiliation of this company with the National Steel Company also somewhat strengthened its position. Nevertheless, the company was of decidedly subordinate importance in comparison with most of the other large concerns under discussion, and easily vulnerable to attack.

At the organization of these great companies, therefore, there was a marked degree of interdependence among them. For a short time after their formation this general situation was fairly well maintained. The three largest concerns—the Carnegie Company, the Federal Steel Company, and the National Steel Company—still restricted their operations for the most part to the production of crude steel or the cruder and simpler steel products which they had previously made, while those consolidations making more highly finished products continued to buy a large portion of their requirements of iron and steel from the principal steel-making concerns just named.

This balance or adjustment of trade conditions was, however, speedily disturbed. As already shown, the makers of the lighter forms of steel products began to extend the scope of their activities, or to plan such extensions, with a view to supplying themselves with the raw material of manufacture, namely, the semifinished steel hitherto purchased from others.

In other words, just at the time that concerns like the Carnegie and Federal Steel companies had extended their investment in raw materials and transportation facilities and had greatly enlarged their plant capacity, they were confronted with the loss of the patronage of some of their best customers, because the latter, in turn, had been extending their activities in the same directions. Under these circumstances a counterpolicy of extension into finished lines by the larger steel concerns became almost imperative. This counterstroke was, in fact, promptly threatened, and the whole industry was unsettled by the prospect of an era of extremely severe competition.

This threatened competition should be regarded particularly from two standpoints—first, it meant an enormous enlargement of productive capacity, and one which would apparently exceed the normal consuming power of the country for a long time to come, and, second, it meant the breaking down of the extremely profitable quasi-monopolies already established in particular products of the industry, such as wire, tubes, tin plate, and sheets. Both considerations obviously threatened to reduce profits in the steel industry to a decidedly lower level.

In the year 1900 the prospective loss of business for the great steel-producing companies, accompanied by a slackened activity in the trade, developed an exceedingly acute situation. The Federal Steel Company prepared to take up the manufacture of several lines of finished products, namely, structural material, universal plates, and tubes. In the summer of the same year it was reported that the Carnegie Company would go into the manufacture of wire rods on an extensive scale, thus "invading" the territory of the secondary group. This action was generally regarded as a blow at the American Steel and Wire Company, which had just threatened to erect additional blast furnaces and a large steel plant. Reports of further important plans of the Carnegie Company for extending its lines of production of finished products were current during the year 1900, and early in 1901 the definite announcement was made that the company was about to take up the manufacture of steel tubes in a new plant of enormous capacity, to be constructed at Conneaut Harbor, Ohio. This announcement, moreover, was made in such a way that it could be interpreted only as a declaration on the part of the Carnegie interests that they did not propose to submit idly to the loss of tonnage threatened by the plans of some of the larger consolidations making finished products, which previously had been among their largest customers. Not only was this the interpretation of the company's move placed on it by the trade, but it was expressly stated in a newspaper article as representing the attitude of Mr. Carnegie himself. This will be seen from the following excerpt:

> Mr. Carnegie's personal view of the situation may be authoritatively stated as follows: * * *
>
> The National Tube Company formerly obtained its steel billets from the Carnegie Company, but decided to erect blast furnaces and mills to supply itself. Naturally, the Carnegie Company then announced that it would be forced to erect mills to finish its own product into tubes.[1]

The intention of the Carnegie interests to extend their manufacture of finished lines had, indeed, been contemplated for some time. In an interview in the London Iron and Coal Trades Review of May 12, 1899, Mr. Carnegie was quoted as saying:

> Yes, we have been erecting several new departments, including what I believe will be the largest axle factory in the world. Why, it may be asked, should steel makers make plates for other firms to work up into boilers, when they can manufacture the boilers themselves? Or beams and girders for bridges, when they can turn out and build up the completed article, or plates for pipes when they can make the pipes? I think the next step to be taken by steel makers will be to furnish finished articles ready for use. In the future the most successful firms will be those that go the farthest in this direction.

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[1] New York Evening Post, January 21, 1901.

Furthermore this proposed entrance of the Carnegie concern into the tube business was regarded by the trade as the forerunner of still further projects. In fact, the announcement was almost immediately followed by a well-defined report that the Carnegie Company would at once invade the field of the American Sheet Steel Company by the erection of a sheet plant at Duquesne, capable of turning out 60,000 tons of sheets annually. Simultaneously there were reports that the company would speedily take up the manufacture of tin plate on a large scale.

This unmistakable evidence of an aggressive policy of retaliation on the part of the Carnegie concern, accompanied as it was by the important extensions into the manufacture of finished articles announced by the Federal Steel Company, revealed sharply the trend of the existing conditions, and naturally had a very disquieting effect in the trade and in financial circles. Both the trade journals and the financial press were filled with articles to the effect that a "battle of the giants" in the steel industry was at hand.

In such a contest it was apparent to all that the Carnegie Company, while likely at first to lose some business, might be expected in the long run to maintain, and even to increase, its dominating position in the industry. Its long established business, the modern character of its plants, its efficient technical and commercial organization, as well as its strong financial position, made it easily superior to any of its competitors. It had a distinct advantage in all these respects over even the Federal Steel Company, which was its largest rival, but whose plants were for the most part less modern and also widely separated geographically. There was no question that if the Carnegie Company, with its unlimited means and efficient organization, went into the manufacture of wire, tubes, sheets, or tin plate it would be more than able to hold its own against the respective large consolidations which produced those products, and which in their efforts to monopolize the business had been constrained to include in their respective organizations many plants of inferior character.

THE FINANCIAL SITUATION.—This unsettled trade situation was aggravated because of the importance which the securities of several of these steel concerns had assumed in the stock market. A period of violent competition in the steel industry would inevitably have been followed by a great decline in the value of these securities. A still more important matter was that the financial backers of some of these steel concerns had extensive commitments in other directions, which might be jeopardized by such an acute struggle in the steel industry. From the standpoint of these financiers, therefore, the situation presented at once a great danger and a great opportunity.

From a financial point of view there were four important steel groups, which were more or less distinct, namely, the Morgan group, the Moore group, and the Carnegie and the Rockefeller interests.

The Morgan group, which included the Federal Steel, National Tube, and American Bridge companies, enjoyed of course the advantage of a strong financial support, but these financial interests were extensively committed in other lines of business, especially in railroad financiering. They naturally would be especially concerned in preventing the outbreak of the threatened competition in the steel business. It may be noted that there were reports at this time that the Carnegie interests were contemplating the construction of a railroad from Pittsburg to the Atlantic seaboard. This threat, if made good, would have created an extremely disturbing factor in the trunk-line situation.

The Moore concerns, already described, were the most heavily overcapitalized and suffered from a distinctly speculative backing.

The Carnegie interests had abundant capital and credit, and their securities did not figure on the stock market, while their organization and management were unequaled. They were apparently in the best position of any of these groups to meet a price war.

The Rockefeller interests were entirely concerned with the production and transportation of iron ore. Their financial resources were of course abundant for any emergency. Their stocks did not figure to any appreciable extent on the exchanges.

The American Steel and Wire Company apparently was not closely affiliated with any of the foregoing groups. Despite its great earnings, its position was vulnerable. It apparently had no especial banking support.

It is evident, therefore, that, both from the point of view of the iron and steel industry and that of the stock market, the threatened outbreak of violent competition between these rival interests involved serious consequences. It might have meant the sudden termination of the extraordinary period of speculative activity and profit. On the other hand, an averting of this conflict by a merger of the various great consolidations, if successfully financed, would be a tremendous "bull" argument. It would afford its promoters an opportunity for enormous stock-market profits through the sale of its securities. The advantages to these interests, through the concentration of profits in different stages of the industry under a single control, would also be considerable, and there was undoubtedly some advantage to be gained through the further integration which such a consolidation would render possible.

It was clear to everyone that no consolidation of this sort could be made successful unless it included the Carnegie Company, which was the most powerful factor in the situation, which had long been noted for its aggressive tactics, and which, as above shown, had precipitated this crisis. Moreover, there can be little doubt that many interests in the steel industry regarded Mr. Carnegie's personal influence as a menace to their success, and desired to secure his retirement from the trade. At the same time the enormous earning power of the Carnegie concern would be an exceedingly important consideration both in the profits of the new company and also in facilitating the flotation of its securities.

The primary solution of the situation, therefore, from the standpoint of these interests, was to buy out Mr. Carnegie. Mr. Carnegie's well-known willingness to sell made the problem largely one of terms. Negotiations were promptly undertaken and speedily concluded by arranging to take over his large interest in his concern in exchange for bonds of the new consolidation. On March 2, 1901, announcement was made by J. P. Morgan & Co., as bankers, that arrangements had been completed for the organization of the United States Steel Corporation to acquire control of the following concerns: Carnegie Company (of New Jersey), Federal Steel Company, American Steel and Wire Company, National Tube Company, National Steel Company, American Tin Plate Company, American Steel Hoop Company, and American Sheet Steel Company.

The preliminary incorporation papers of the new company, under New Jersey laws, had already been taken out. The terms offered the constituent companies, which are given elsewhere (see p. 113), were speedily accepted by a great majority of the stockholders of these concerns, and, on April 1, 1901, within a very few weeks after the first serious intimation that negotiations were under way the United States Steel Corporation was definitely launched and in actual operation. The authorized capital stock was $1,100,000,000, equally divided between preferred and common shares. In addition there was a bond issue of $304,000,000 (exclusive of underlying indebtedness aggregating approximately $81,000,000, this including sundry mortgages and purchase-money obligations). About $425,000,000 of each class of stock and all of the bonds were issued for the companies named and for other purposes. Very soon after its organization the Corporation made three further important acquisitions, namely, the Lake Superior Consolidated Iron Mines, the Bessemer Steamship Company, and the American Bridge Company. It also acquired a one-sixth interest in the Oliver Iron Mining Company and the Pittsburg Steamship Company, the other five-sixths having been secured in the purchase of the Carnegie Company. During the following summer it purchased the Shelby Steel Tube Company. As a result of these acquisitions its issue of stock was increased to over $500,000,000 of each class, giving it an issued capitalization in stock alone of more than $1,000,000,000. (See p. 113.)

Thus, the threatened conflict in the steel industry was averted, while, as shown later, an unprecedented profit was reaped by the organization syndicate.

Section 15. Essential character of the Steel Corporation in 1901.

The character of the Steel Corporation as a consolidation of consolidations, as well as some idea of its magnitude, is brought out by the table facing this page.

The United States Steel Corporation, by including in its organization both of the first two groups of companies described, insured to itself on the one hand an abundant capacity for the production of crude steel and a large proportion of the country's output of heavy rolled products, and, on the other hand, secured control of several quasi-monopolistic concerns manufacturing particular lines of the more elaborated products, such as sheets, tin plate, tubes, and wire. The abundant steel-making capacity of the first group made it easy, of course, to supply all the steel required by this second group of concerns. Furthermore, while the companies in the first group taken together were very well fortified with reserves of raw materials, the acquisition of the Lake Superior Consolidated Iron Mines furnished an enormous additional supply and gave to the Corporation an exceptional degree of strength in this respect. It also contributed to the combination one of the most important railroads in the Lake ore region.

The position taken by the Steel Corporation is that this great aggregation of property was in the main an assembling and coordination of different branches in the industry, the primary object of which was to secure greater efficiency and integration, and, of course, the saving of the payment of profits to others. The Corporation contends that most of its constituent concerns were not in actual competition with one another, and it is disposed to minimize the restriction of competition brought about as a result of this great merger.

It is true that certain of the constituent consolidations, as, for instance, the American Steel and Wire Company and the National Tube Company, were not competing with one another at this particular period. However, there was active competition between the three principal crude-steel concerns—the Carnegie Company, the Federal Steel Company, and the National Steel Company—while these concerns, to some extent at least, were in competition with some of the large consolidations making the lighter finished products. Moreover, the fact should not be lost sight of that nearly all of the latter class of consolidations were originally created with the intention of restricting competition. A more important matter is that a period of violent competition among all of these concerns was imminent, as already described, and that the United States Steel Corporation was organized for the specific purpose of preventing the new competition thus threatened as well as eliminating that already existing among these concerns. The opportunity for reaping a huge promoter's profit out of this situation undoubtedly was an important consideration in bringing about the merger. Nevertheless the primary object was the restriction or prevention of competition.

The argument that this merger permitted increased efficiency through greater integration and coordination undoubtedly has some force. In particular there is no doubt that the integration with the manufacturing plants of all these consolidations of such extensive resources of raw materials as the ore properties of the Lake Superior Consolidated and Minnesota Iron (Federal) companies, and the coke properties of the Frick (Carnegie) company, not to mention others, was of great advantage from a commercial standpoint, i. e., in saving the payment of profits to others. In the same way, the inclusion of some of the most important ore-carrying railroads both at the head of the Lakes and between Lake Erie and Pittsburg, as well as the great ore fleets on the Lakes, meant that the profits earned on such transportation would come to the consolidated company. The control of these ore roads also would result in giving the Steel Corporation a great advantage over other producers who were compelled to use them. There is no doubt also that the bringing together of so many great manufacturing properties under one control opened up possibilities of a more economical subdivision of the business whereby particular plants could concentrate work on particular kinds of rolled products, and whereby the distinctly inferior plants could be dismantled or at least shut down and used only when the demand was unusually great. So far, however, as the integration of manufacturing processes themselves were concerned, the advantages of such a system were probably about as fully realized by the larger and better equipped plants of some of the constituent concerns. At any rate, little gain in this respect could be expected from merely bringing the several plants under a single control. On the other hand, there would be a real economy possible in dividing the work so that the products sold would be made at the plants which were nearest to the markets to be supplied. For example, the structural or merchant steel requirements of the western markets could be more economically supplied from the works of the Federal Steel Company, while the Carnegie Company would be better situated to supply the eastern markets and the export trade. Such arrangements already existed to some extent in the case of some of the constituent concerns.

These possible economies of consolidation, however, probably were a subordinate consideration in the formation of the Steel Corporation except those of a commercial character, i. e., those that did away with the necessity of paying a profit to somebody else on the raw materials or transportation of raw materials. The possibilities of real manufacturing economies could be but slowly realized in most cases, and, as already stated, the controlling motive in the organization of the company was to avert the competitive struggle then threatened. Meanwhile, however, the argument of economy and increased earning power was used to justify the formation of the combination, and also to facilitate the flotation of its securities.

The crude-steel (ingot) capacity of the Corporation at its organization was fully 9,400,000 tons, this representing substantially 66 per cent of the total for the country, while its capacity for the various finished products which it manufactured was approximately 7,700,000 tons, this representing about 50 per cent of the total of the country for these lines. In certain products, however, the Corporation's percentage approached a complete monopoly. Its larger percentage of crude than of finished steel is explained by the fact that some of the principal steel-making concerns did not have finishing mills for more than a portion of their output.

Roughly speaking, it may be said that the Corporation at its organization secured control of three-fifths of the steel business of the country. Its proportion of the pig-iron business was somewhat smaller, about 44 per cent, its actual capacity of this product being about 7,400,000 tons. These figures, however, do not fairly state the position of the Corporation, because of the large production by outsiders of foundry pig iron and certain special kinds of pig iron which really did not involve competition with the Corporation. The Corporation's share of the production of pig iron for strictly steel-making purposes was probably not less than 58 per cent.

The Corporation had hundreds of millions of tons of desirable Lake ore in reserves, over 50,000 acres of the choicest coking-coal lands, over 1,000 miles of railroad, exclusive of subsidiary trackage, a fleet of 112 Lake steamers and barges, not to mention large investments in docks, natural-gas and limestone properties, and other kindred branches of the industry.

Despite its enormous size the United States Steel Corporation did not secure a monopoly of the iron and steel industry as a whole, although its position in several branches was monopolistic (that is, tending toward monopoly). In the case of a few products, such as tin plate, sheets, wire, and nails, its control was at first very nearly complete, but in other branches of the industry it had a number of important rivals from the start. Thus, it will be seen that the Corporation did not include such concerns as the Pennsylvania Steel Company, the Cambria Steel Company, the Lackawanna Iron and Steel Company, Jones & Laughlins (Ltd.), the Bethlehem Steel Company, the Republic Iron and Steel Company, and the Colorado Fuel and Iron Company, not to mention several others of magnitude. At the start, moreover, the Corporation did not acquire the Tennessee Coal, Iron and Railroad Company, that concern not being taken over until 1907.

Several of these outside concerns were at that time engaged in the manufacture of special products which did not bring them into sharp conflict with the Corporation, or confined their activities to a more limited field than that of the Corporation. The failure of the Corporation to include such concerns was, therefore, less significant than might at first sight appear. However, several of the companies remaining outside, notably the Jones & Laughlin interests, the Lackawanna Iron and Steel Company (see p. 96), the Republic Iron and Steel Company, the Pennsylvania Steel Company, and the Cambria Steel Company, were important rivals of the Corporation. The Colorado Fuel and Iron Company in the West on account of its geographical location, was not a serious rival. Nevertheless, negotiations were entered into shortly after the organization of the Steel Corporation for the acquisition of that concern, but were not consummated. The Tennessee Coal, Iron and Railroad Company in the South was at this time chiefly concerned with the production of foundry pig iron.

The consolidation movement in the steel industry reached a climax in the organization of the Steel Corporation. Some other important mergers of iron and steel properties were subsequently effected; most of these, however, were of concerns engaged in the manufacture of machinery and highly elaborated iron and steel products, rather than in those cruder and simpler steel products which were chiefly turned out by the concerns already discussed in this chapter, and none of them compared in size with the Steel Corporation.

The Corporation itself, moreover, made several further important acquisitions aside from that of the Tennessee Coal, Iron and Railroad Company. These are referred to in detail in Chapter V.

CHAPTER II.

ANALYSIS OF INVESTMENT OF CONSTITUENT COMPANIES OF UNITED STATES STEEL CORPORATION.

Section 1. Importance of determining actual investment as distinguished from book valuations of assets.

As already stated, an important feature of the Bureau's investigation of the steel industry is a discussion of the relation between investment and capitalization. Such a study is important because of its direct bearing upon the reasonableness of prices and profits. Owing to the fact that the consolidation movement in the steel industry was accompanied by a great inflation of security issues, a comparison of profits with capitalization as a rule does not show the true rate of profit. Instead, it is necessary to determine approximately the actual investment value of the properties represented by such capitalization.

It may be noted at this point that the Bureau has not attempted to lay down principles as to the proper basis of capitalization. Opinions as to the proper basis of capitalizing an industrial concern are extremely diverse. One of the most common theories is that capitalization should represent only the actual cash investment in the property of a corporation. Another theory assumes the cost of reproduction of plants and other assets, and not the original cash investment, as the proper basis. Another view largely ignores both the preceding considerations, and holds that capitalization should be chiefly determined by earning power; that is, that the amount of securities should be that on which the anticipated earnings will yield at least a certain rate of profit, this rate varying with different industries and even with different corporations in the same industry, and depending largely, of course, upon the personal views of the organizers. Generally speaking, this capitalization on the basis of earning power has been the one followed in the organization of the great industrial corporations of the present time, in so far as any definite theory has prevailed at all. Still another theory is that the capitalization of a corporation should be so adjusted and readjusted that its securities will sell substantially at par.

It is not intended in this report to pass upon the merits of these conflicting views. Obviously, the significance of the word "overcapitalization" depends largely upon which of them is accepted as the correct standard. Instead of passing upon such a controverted point, the discussion in this report has been concerned with a presentation of facts in order to show the relationship between capitalization and the investment represented thereby, and particularly the relationship between the investment in tangible property values and the securities issued. The value of intangible items such as good will, "merger value," and similar considerations is not denied, but, instead of attempting to measure such values, as a rule this report simply points out their existence. It may be noted, however, that such intangible considerations as good will appear to be of relatively less importance in the steel industry than in many other industries where brand values, trade-marks, and similar factors play an important part.

While not attempting to lay down rules as to capitalization, the report does not hesitate, in some cases, to characterize the issuance of securities as involving overcapitalization, since the evidence at times is conclusive that, judged by any standard, the issue was excessive. (See also p. 325.)

In the following discussion the word "capitalization" is used to represent the total par value of the stocks and bonds directly issued by a given company, including, unless otherwise indicated, the bonds of underlying companies. Issues of debentures are regarded as similar to issues of bonds, and the same is true of certain temporary indebtedness, such as purchase-money obligations and sundry real-estate mortgages, which in most cases appear to have been issued for fixed property. Ordinary bills and accounts payable, of course, are not considered as coming within the term capitalization.

Section 2. Comparison of total securities issued by Steel Corporation with total securities and cash acquired by it.

For the companies acquired at its organization and shortly thereafter, in 1901,[1] plus $25,003,000 cash capital, together with underwriting services (see p. 243), the United States Steel Corporation issued the following securities:

Preferred stock	$510,205,743
Common stock	508,227,394
Bonds	303,450,000
Total	1,321,883,137
Add:	
Underlying bonds of constituent companies[2]	59,091,657
Mortgages and purchase money obligations[3]	21,872,023
Grand total	1,402,846,817

The total of the securities directly issued by the United States Steel Corporation ($1,321,883,137) was very greatly in excess of the total securities of the constituent companies thereby acquired. The terms on which the securities of these constituent concerns were exchanged and the total amounts of United States Steel securities issued in such exchange are given in the following table:

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[1] Including the American Bridge Company, the Lake Superior Consolidated Iron Mines, the Bessemer Steamship Company, and the Shelby Steel Tube Company. The additional securities acquired during 1901 by exchange of stock consisted of scattered shares of companies, the bulk of whose stocks had already been purchased.

[2] Including $41,844 scrip of the Illinois Steel Company.

[3] Includes $8,500,000 issued for the Bessemer Steamship Company after the formation of the Steel Corporation.

TABLE 4.—COMPARISON OF SECURITIES ISSUED BY UNITED STATES STEEL CORPORATION IN 1901 WITH AMOUNTS OF SECURITIES OF CONSTITUENT CONCERNS AND CASH ACQUIRED THEREFOR.

Company.	Securities and cash acquired.[1]	United States Steel stock issued for each $100 old stock.		Amount United States Steel securities issued in exchange.			
		Preferred.	Common.	Bonds.	Preferred stock.	Common stock.	Total.
Carnegie Company:							
Bonds	[2] $159,450,000	(3)	(3)	$159,450,000			
Stock (all common)	160,000,000			144,000,000	$98,277,120	$90,279,040	$492,006,160
Federal Steel Company:							
Preferred stock	53,260,200	$110.00			58,586,220		
Common stock	46,483,700	4.00	$107.50		1,859,348	49,969,978	110,415,546
National Tube Company:							
Preferred stock	39,997,400	125.00			49,996,750		
Common stock	39,937,400	8.80	125.00		3,514,491	49,921,750	103,432,991
American Steel and Wire Company of New Jersey:							
Preferred stock	39,998,500	117.50			46,998,237		
Common stock	49,901,900		102.50			51,149,448	98,147,685
National Steel Company:							
Preferred stock	26,992,200	125.00			33,740,250		
Common stock	31,969,800		125.00			39,962,250	73,702,500
American Tin Plate Company:							
Preferred stock	18,325,000	125.00			22,906,250		
Common stock	27,995,000	20.00	125.00		5,599,000	34,993,750	63,499,000
American Steel Hoop Company:							
Preferred stock	13,997,500	100.00			13,997,500		
Common stock	18,995,000		100.00			18,995,000	32,992,500
American Sheet Steel Company:							
Preferred stock	24,497,700	100.00			24,497,700		
Common stock	24,498,800		100.00			24,498,800	48,996,500

[1] Includes scattered shares purchased from April to December, 1901. Up to the close of 1901 the following stocks of subsidiary companies had not been acquired:

Company.	Preferred stock.	Common stock.	Company.	Preferred stock.	Common stock.
Federal Steel Company	$700	$600	Lake Superior Consolidated Iron Mines		$10,689
American Steel and Wire Company	1,000	18,600	Subsidiary stocks		91,218
National Steel Company	4,000	30,000	Shelby Steel Tube Company	$223,900	133,300
American Sheet Steel Company	400	400	Total	246,200	289,207
American Bridge Company	16,200	4,400			

Some of these stocks were acquired later.

[2] The remaining $550,000 of Carnegie bonds are included under the item of underlying bonds of subsidiary companies.

[3] See note 2, page 174.

TABLE 4.—COMPARISON OF SECURITIES ISSUED BY UNITED STATES STEEL CORPORATION IN 1901 WITH AMOUNTS OF SECURITIES OF CONSTITUENT CONCERNS AND CASH ACQUIRED THEREFOR—Continued.

Company.	Securities and cash acquired.	United States Steel stock issued for each $100 old stock.		Amount United States Steel securities issued in exchange.			
		Preferred.	Common.	Bonds.	Preferred stock.	Common stock.	Total.
American Bridge Company:							
Preferred stock	$31,348,000	$110.00			$34,482,800		
Common stock	30,946,400		$105.00			$32,493,720	$66,976,520
Lake Superior Consolidated Iron Mines: Common stock	29,413,905	135.00	135.00		39,708,771	39,708,771	79,417,542
Oliver Iron Mining and Pittsburg S. S. companies (one-sixth interest)	421,700				9,250,000	9,250,000	18,500,000
Shelby Steel Tube Company:							
Preferred stock	4,776,100	37.50			1,791,038		
Common stock	8,018,200		25.00			2,004,550	3,795,588
Total securities acquired by direct exchange[1]	[2] 881,224,405			$303,450,000	445,205,475	443,227,057	1,191,882,532
United States Steel stocks issued to syndicate for $174,000 par value of stocks acquired otherwise than by direct exchange and for $25,000,000 cash capital and underwriting services	174,000 25,000,000				64,998,768	64,998,837	129,997,605
Stock sold to incorporators for cash	3,000				1,500	1,500	3,000
Total	906,401,405			303,450,000	510,205,743	508,227,394	1,321,883,137
Underlying bonds of constituent companies							59,091,657
Mortgages and purchase money obligations of constituent companies							[3] 21,872,023
Grand total securities issued and assumed							1,402,846,817

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[1] The following securities of several of the companies were acquired otherwise than by direct exchange, as explained in the text:

National Tube Company:	
Preferred	$2,600
Common	62,600
American Steel and Wire Company of New Jersey:	
Preferred	500
Common	79,500
National Steel Company:	
Preferred	3,800
Common	200
American Tin Plate Company: Common	$5,000
American Steel Hoop Company:	
Preferred	2,500
Common	5,000
American Sheet Steel Company:	
Preferred	1,900
Common	800
American Bridge Company: Preferred	9,600
	174,000

[2] See note 1 on page 113.

[3] Includes $8,500,000 purchase-money obligations issued for the Bessemer Steamship Company.

It will be noted that the stock of the Bessemer Steamship Company was acquired through the issue of purchase-money obligations, these being issued by the Pittsburg Steamship Company, a subsidiary concern. A cash price of $8,500,000 was named on this property, and while it might be considered that the working capital of the Corporation was reduced by that amount, as already stated, such purchase-money obligations have not been treated by the Bureau as ordinary current liabilities. Until their redemption, which was not commenced until November, 1902, the actual working capital of the Corporation was not reduced on account of this acquisition.

It will be seen, therefore, that the organization of the United States Steel Corporation resulted in an increase of capitalization over that of its constituent concerns (not considering underlying bonds, scrip, purchase-money obligations, etc.) from $881,398,405[1] to $1,321,883,137, or of $440,484,732; after deducting $25,003,000 new cash capital, there was a net increase of $415,481,732, or 47 per cent.

It is worth calling attention to the fact that no less than $144,000,000 of this increase in capitalization was in the form of bonds. The total preferred-stock issue of the new company, namely, $510,205,743, compares with an aggregate of $253,213,500 for the preferred issues of the subsidiary concerns, an increase of $256,992,243. Its total issue of common stock, $508,227,394, compares with an aggregate of $468,734,905 for the subsidiaries, an increase of $39,492,489.

A part of the increase in capitalization, as just noted, was covered by the $25,003,000 new cash capital provided.

Section 3. Methods of determining the investment of the Steel Corporation.

As the first step in an analysis of the investment of the United States Steel Corporation it is desirable to present a statement of the value (reduced to a cash basis) of the physical property acquired by the company at the time of its organization in 1901. Such a valuation, so far as the Steel Corporation is concerned, may be regarded as the approximate equivalent of its investment in such property at that time. Having done this, the subsequent additions to the Corporation's investment can be determined from its official reports and additional data obtained directly from the Corporation.

The establishment of the value of the physical properties of the Corporation at its organization in 1901 is a difficult task. Obviously a valuation or appraisal of the physical properties of the Corporation as they existed on that date is now impossible. No such appraisal, nor even a detailed estimate, appears to have been made at the time the company was organized. Owing to the great importance of determining upon a valuation which shall be fair and yet at the same time not distorted because of the great inflation of securities issued, the Bureau has made its analysis by three different methods—first, by historical study of the organization and investment of the constituent concerns at the time of their formation; second, by computation of the public estimate of the value of the properties of these constituent concerns as reflected in the market prices of their securities; third, by a more detailed estimate of the value of the physical properties of the Corporation by departments of its business, computed from all available data, and with an especially elaborate calculation of the value of the ore property.

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[1] This includes $174,000 stock in constituent companies acquired otherwise than by direct exchange.

The United States Steel Corporation and several of its constituent companies discussed in the following pages were holding companies, either wholly or in part, so that, strictly speaking, their property to this extent consisted of securities held in their treasuries. For the sake of clearness and convenience, however, this technical consideration will be disregarded and the property of such holding companies considered as the property covered by the securities thus owned.

The Bureau's analysis, based upon historical study of the organization and investment of the constituent concerns of the Steel Corporation, is presented in this chapter. In general the evidence shows that in the organization of the principal constituent concerns of the Steel Corporation preferred stock was issued up to the full amount of the physical assets, at least, and in many cases up to the full value of the properties acquired, including intangible considerations as well, so that the common stock was nothing more than a mere bonus. The common stock of the Federal Steel Company, however, had some tangible assets back of it. In the case of the most important constituent concern, the Carnegie Company, there was no preferred stock, but instead a large issue of bonds. For this concern the evidence on the whole tends to show that bonds were issued substantially up to the full amount of the physical assets acquired and that the stock was issued merely against good will and other intangible considerations.

Such analysis of the investment in the constituent companies of the Steel Corporation at the dates of their respective organizations does not, of course, fairly represent the value of such investment in April, 1901, when these concerns were acquired by the Steel Corporation. The accumulated surplus earnings of these concerns during the intervening period are, however, available, and by combining these and capital otherwise obtained with the Bureau's estimate of the original investment there is obtained what is approximately the investment of these concerns at the time the Steel Corporation was formed. (See p. 167.)

After analyzing the investment of the constituent concerns in this manner, the second method above noted is taken up, namely, the computation of the market prices of the securities of these constituent companies. The more elaborate analysis by the third method is presented in Chapter III, while in Chapter IV the evidence obtained by all these methods is summarized, together with some further data bearing upon the problem.

No one of these methods of analysis can be regarded as precise or absolutely conclusive, but the study of the investment in the property of the Corporation from these three different points of view gives a basis for a fair and approximately correct estimate of that value. In any event, the methods followed in this report afford by far the best criterion for judging the investment in these properties that can be presented so long after the company was formed.

There will first be taken up the historical analysis of the organization of the principal constituent concerns. It will be found convenient to discuss these companies in the following order:

Federal Steel Company.
American Steel and Wire Company.
American Tin Plate Company.
National Steel Company.
American Steel Hoop Company.
American Sheet Steel Company.
National Tube Company.
Shelby Steel Tube Company.
American Bridge Company.
Lake Superior Consolidated Iron Mines.
Bessemer Steamship Company.
Carnegie Company.

Section 4. Federal Steel Company.

The Federal Steel Company at its organization in September, 1898, issued $53,260,900 of 6 per cent noncumulative preferred stock and $46,484,300 of common stock, a total of $99,745,200. The authorized amounts were $100,000,000 of each class. It acquired therefor the stocks of the Illinois Steel Company, the Minnesota Iron Company, the Elgin, Joliet and Eastern Railway Company, the Lorain Steel Company of Ohio (a majority interest), and the Johnson Company of Pennsylvania,[1] aggregating $49,168,435, together with a net sum of $11,692,224 cash.[2] The various stocks were acquired subject to bonded indebtedness aggregating $30,217,179. The transaction is summarized in the following table:

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[1] This covered stocks of certain subsidiaries of that concern.

[2] The organization agreement provided for the raising of $14,075,000 cash, but a portion of this was used in part payment of the Lorain Steel Company, as indicated in the table. The net amount of cash, as stated above, may not allow for expenses of organization.

TABLE 5.—COMPARISON OF STOCK ISSUED BY FEDERAL STEEL COMPANY WITH SECURITIES AND CASH ACQUIRED AT ITS ORGANIZATION IN SEPTEMBER, 1898.

Federal Steel securities issued:		
Preferred stock, 6 per cent noncumulative		$53,260,900
Common stock		46,484,300
Total		99,745,200
Securities and cash acquired:		
Stock—		
Illinois Steel Company	$18,650,635	
Minnesota Iron Company	16,500,000	
Elgin, Joliet and Eastern Railway Company	6,000,000	
Lorain Steel Company of Ohio	[1] 5,017,800	
Johnson Company of Pennsylvania	3,000,000	
		49,168,435
Cash—		
Syndicate arrangement	14,075,000	
Lorain-Johnson purchase [2]	264,455	
Total	14,339,455	
Less cash paid in connection with Lorain-Johnson purchase	2,647,231	
Net cash		11,692,224
Total securities (par value) and cash acquired		[3] 60,860,659
Excess of securities issued over securities and new cash acquired		38,884,541

There can be no doubt that the large amount of stock issued by the Federal Steel Company considerably exceeded a fair market valuation of the property back of the stocks acquired, plus the new cash capital provided, after allowing for the bonded indebtedness.

The Federal Steel Company offered to issue its preferred stock for the shares of three of the constituent companies on the following terms: Illinois Steel Company, 1 share for each share of old stock; Minnesota Iron Company, 1.355 shares for each share of old stock; Elgin, Joliet and Eastern Railway Company, 0.875 share for each share of old stock.

The company also agreed to deliver to the underwriting syndicate in return for $14,075,000 of cash and the services of the syndicate $5,680,565 par value of its preferred stock and $45,426,500 par value of its common stock. It was stipulated, however, in the underwriting

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[1] The Federal Steel Company subsequently acquired the remaining $3,982,200 stock of the Lorain Steel Company at par, thereby reducing its working capital to that extent, but the above is a correct statement of the transaction at the time.

[2] See page 124.

[3] These various stocks were acquired subject to bonded indebtedness of $30,217,179, as follows:

Illinois Steel Company	$13,285,123
Southwest Connellsville Coke Company	173,056
Minnesota Iron Company (underlying bonds)	7,742,000
Elgin, Joliet and Eastern Railway Company	7,417,000
Lorain Steel Company (underlying bonds)	1,600,000
Total	30,217,179

agreement that the syndicate should offer to the stockholders of the constituent companies an alternative proposition by which, on deposit of certain sums in cash, these stockholders would receive, in addition to the respective amounts of preferred stock above stated, a certain amount in common stock of the company, the cash so raised, of course, relieving the syndicate to that extent of the necessity of providing the stipulated amount of $14,075,000. The arrangement, so far as these three principal companies were concerned, worked out as follows:[1]

TABLE 6.—AMOUNTS OF FEDERAL STEEL STOCKS DELIVERED BY UNDERWRITING SYNDICATE IN EXCHANGE FOR STOCKS IN ACQUIRED COMPANIES, AND CASH SECURED IN CONNECTION WITH THIS EXCHANGE.[2]

Constituent company.	Deposited.			Received in Federal Steel stocks.			
	Old stock, par value.	Cash.		Preferred.		Common.	
		Amount per share.	Total.	Amount per share.	Total.	Amount per share.	Total.
Illinois Steel Company....	$18,650,635	$20.00	$3,730,127	$100.00	$18,650,635	$80.00	$14,920,508
Minnesota Iron Company.	16,500,000	27.10	4,471,500	135.50	22,357,500	108.40	17,886,000
Elgin, Joliet and Eastern Railway................	6,000,000	17.50	1,050,000	87.50	5,250,000	70.00	4,200,000
Total...............	41,150,635	....	9,251,627	....	46,258,135	....	37,006,508

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[1] The calculation here given is on the assumption that all of the underlying stocks were exchanged. There were a few shares of some of these underlying stocks which were not deposited under this offer within the time limit originally set, and it is possible that when these were subsequently acquired no cash was obtained. The facts could not be definitely ascertained and the amount of such delinquent stock is so small that this consideration may be ignored. (See also p. 126.)

[2] The arrangement offered by the underwriting syndicate is shown below:

Constituent company.	On deposit of—		Received Federal Steel stocks.	
	Old stock, par value.	Required cash payment.	Preferred.	Common.
Illinois Steel Company..................................	$100	$20.00	$100.00	$80.00
Minnesota Iron Company................................	100	27.10	135.50	108.40
Elgin, Joliet and Eastern Railway......................	100	17.50	87.50	70.00

It is worth noting that if Federal Steel preferred stock had been considered worth $80 in cash the prices in that stock for the constituent stocks given on page 118 would suggest a cash value of these as follows: Minnesota Iron, $108.40; Illinois Steel, $80; Elgin, Joliet and Eastern Railway, $70. If from the amounts of preferred stock received by stockholders of these concerns as stated here there be deducted the amounts subscribed for in cash, it will be seen that the remaining amounts of preferred would be identical in each case with the amounts of common, and moreover identical with the indicated cash values just given. These facts suggest the possibility that $100 in preferred and $100 in common stock of the Federal Steel Company was given for each $100 of appraised cash value of the acquired stocks, the remaining preferred stock of the Federal Steel Company being issued in each case for cash at par.

Illinois Steel Company.—For the $18,650,635 stock of the Illinois Steel Company, plus $3,730,127 in cash, therefore, the Federal Steel Company issued $18,650,635 of its preferred and $14,920,508 of its common stock, a total of $33,571,143. The cash value of the equity, in excess of bond indebtedness, in the property represented by this Illinois Steel stock unquestionably was much less. The Illinois Steel Company, which was organized in 1889, was itself a consolidation of three concerns—the North Chicago Rolling Mill Company (with plants at North Chicago, South Chicago, and Milwaukee), the Union Steel Company, and certain property of the Joliet Steel Company, against which the Illinois Steel Company originally issued $17,622,000 of its stock.[1]

The capital stock was subsequently increased to $18,650,635. In addition the Illinois Steel Company had outstanding at the time of the transfer to the Federal Steel Company $13,200,000 bonds and $85,142.67 in scrip.

At this late date it is practically impossible to say how far the stock of the Illinois Steel Company was covered by actual value. The valuation placed upon the plants by the officers of the three constituent concerns at the organization of that company, for purposes of consolidation, was $12,750,000, or about $5,000,000 less than the amount of the stock issued by the new concern.[2] In view of the usual tendency to inflate valuations in such mergers, it seems altogether probable that these plant valuations were liberal. The difference between these valuations and the total issue of stock of the new concern may have been covered by working capital.

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[1] The amounts of the Illinois Steel Company's stock issued for the constituent concerns were given in the 1897 Investors Supplement of the Economist (Chicago) as follows, the rates of exchange being obtained from the consolidation agreement:

Company.	Capital stock of old company at time of merger.	Each $100 of old stock, received in Illinois Steel stock.	Illinois Steel stock issued in order to make the exchange.
North Chicago Rolling Mill Company	$6,000,000	$158.50	$9,510,000
Union Steel Company:			
Preferred	3,000,000	105.00	3,486,000
Common	1,600,000	21.00	
Joliet Steel Company	See below.		4,626,000
Total			17,622,000

The Illinois Steel Company did not acquire the capital stock of the Joliet Steel Company, but instead the manufacturing plant of the latter at Joliet and possibly some of its detached property. The Joliet Steel Company subsequently went into liquidation and distributed to its stockholders the Illinois Steel Company stock received in this manner as well as its remaining assets. The authorized capital stock of the Joliet Steel Company at this time was $3,000,000; the amount outstanding apparently was about $2,900,000.

[2] This total was allotted as follows:

Plant of the North Chicago Rolling Mill Company	$7,000,000
Plant of the Union Steel Company	2,750,000
Plant of the Joliet Steel Company	3,000,000
Total	12,750,000

A condensed balance sheet of the Illinois Steel Company on June 30, 1898, gave the value of the plants, with real estate and improvements, at $20,194,096, and the total book value of the stock (after allowing for bonded indebtedness) at $19,315,542; that is, the capital stock, $18,650,635, and the surplus, $664,907. A condensed statement of the property follows:

Plant	$20, 405, 468
Less reserve for replacements, etc	211, 372
Plant, net	20, 194, 096
Permanent investments	7, 021, 650
Working capital (net)	5, 384, 939
Total net assets	32, 600, 685
Bonds and scrip	13, 285, 143
Book value of stock	19, 315, 542

There is good reason for regarding this book valuation of the stock at this time as sufficiently high. Including the bonds, the indicated book value of the investment was approximately $32,500,000, which was sufficient to cover a very extensive investment in iron and steel properties.

That the company was liberally capitalized, moreover, is indicated by the earnings, which from the date of its organization, in May, 1889, to December 31, 1897, averaged only 3.8 per cent on the capital stock, as follows:

TABLE 7.—SUMMARY OF EARNINGS OF ILLINOIS STEEL COMPANY, 1889–1897.

Year.	Net earnings, after interest on bonds and depreciation charges.	Dividends.	Annual surplus.	Total surplus.
1889 [1]	$798,741	$703,400	$95,341	$95,341
1890	2,261,095	1,425,918	835,177	930,518
1891	1,038,777		1,038,777	1,969,295
1892	2,019,268	[2] 3,452,232	[3] 1,432,964	536,331
1893	[4] 885,803		[3] 885,803	[3] 349,472
1894	30,607		30,607	[3] 318,865
1895	1,233,266		1,233,266	914,401
1896	[3] 704,281	559,519	[3] 1,263,800	[3] 349,399
1897	370,025		370,025	20,626
Total	6,161,695	6,141,069	20,626	20,626

Average annual net earnings, after interest on bonds and depreciation, 8⅔ years	$710,965
Equal on issued stock of $18,650,635 [5] to per cent per annum	3.8
Average annual net earnings, May, 1889, to December, 1892, 3⅔ years	$1,668,513
Average rate, 1889–1892, only per cent per annum	8.9

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[1] Eight months.

[2] These dividends, which include the scrip dividend of 13.51 per cent, or $2,519,700, and a cash dividend of 5 per cent, or $932,532, were not paid until 1893.

[3] Deficit.

[4] Deficit. After allowing for depreciation (chiefly on ore) of $1,467,371.

[5] During a small portion of this period the amount of stock issued was somewhat less, but not enough to materially affect the average rate as here stated.

While there is, of course, no rigid relationship between earnings and property values, it must be admitted that average earnings of less than 4 per cent by a large steel company over a period of more than eight years do not indicate a high value for the stock. It is true that during the latter part of the period covered the iron industry was very badly depressed in sympathy with the commercial panic which affected all business at that time. From 1889 to 1892, however, the steel industry was distinctly prosperous. An average rate of earnings of only 8.9 per cent for this particular period, therefore, indicates that the capitalization of the Illinois Steel Company at least did not understate the investment.

This conclusion is further supported by the prices of the company's stock, which from 1895 to the middle of 1898 (or just prior to the transfer of the company to the Federal Steel Company) ruled at considerably below par, and frequently at much less than half the par value. The highest and lowest prices of stock, yearly, for this period were as follows:

Year.	Highest.	Lowest.	Year.	Highest.	Lowest.
1895	82¼	59	1897	50	29½
1896	75	33	1898 (January to July)	60	44½

In the latter part of 1898 the price of the stock rose sharply, but this was undoubtedly due to the pending organization of the Federal Steel Company.

So far as the available evidence goes, therefore, it suggests that the maximum valuation which can be placed upon the stock of the Illinois Steel Company would be the book valuation above given, namely, $19,315,542, or after an adjustment for the accounts of certain subsidiaries, $19,238,149. Indeed, such valuation seems unduly liberal. Using this figure, however, and adding to it the $3,730,127 in cash acquired therewith (see Table 6) gives a total consideration of $22,968,276, against which the Federal Steel Company, as above shown, issued $33,571,143 of its stock ($18,650,635 preferred and $14,920,508 common). This, of course, is over and above the bonded indebtedness.

Minnesota Iron Company.—For the $16,500,000 stock of this concern, plus $4,471,500 cash, the Federal Steel Company (see Table 6) issued $22,357,500 of its preferred and $17,886,000 of its common stock, or a total of $40,243,500.

It is exceedingly difficult to estimate the value of the Minnesota Iron Company. It included extensive ore property, improved and unimproved, a fleet of 9 ore steamers and 7 barges, also $3,000,000 capital stock of the Duluth and Iron Range Railroad, a very profitable concern, together with some miscellaneous securities and quick assets. The consolidated balance sheet of the company for June 30, 1898, the date as of which the Federal Steel Company acquired this concern, showed a surplus of $6,436,134, which, added to the capital stock of $16,500,000, gives a total book value of $22,936,134; the company had no bonded debt, but there were $7,742,000 underlying bonds.

While there can be little doubt that the actual investment in the property was considerably less than the book value, it is difficult to say how far the book value may have differed from a fair current valuation of the property at the time the Federal Steel Company was organized. The ore property of the company had enhanced in value somewhat, while the extent of the ore reserves later proved to be considerably greater than the original estimates. The value of the company's investment in the Duluth and Iron Range Railroad, which had a substantial monopoly of the ore business in a limited section of the Lake region and which earned large profits (an average of nearly 20 per cent on the $3,000,000 capital stock from 1894 to 1898), is also difficult to estimate.

The earnings of the Minnesota Iron Company for the three years ended April 30, 1893 (later figures are not available), were equivalent to 8¼ per cent on the $16,500,000 of stock outstanding. As these, on the whole, were distinctly prosperous years, this average rate does not indicate a valuation of the property in excess of the stock plus the accumulated surplus. The market valuation of the stock of the company during this period ranged from about $65 to $90 per share, or considerably less than par value, while from 1894 to July, 1898, the stock never sold as high as $80 and frequently sold below $50, and occasionally below $40, per share; in the latter part of 1898 it rose sharply to about par, but this price was in anticipation of the organization of the Federal Steel Company and can not be used as an indication of the value of the property.[1]

Therefore, as in the case of the Illinois Steel Company, so far as the available evidence indicates, there is reason to believe that the real value of the property did not exceed the book value, i. e., the capital stock plus the surplus, as shown by the consolidated balance sheet.

Elgin, Joliet and Eastern Railway Company.—The stock of the Elgin, Joliet and Eastern Railway Company, as above noted, was valued for consolidation purposes at $87.50 per share in Federal Steel preferred stock, this being equivalent at the current market price of

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[1] The range of quotations yearly from 1890 to 1898 was as follows:

1890	80 –91
1891	68 –84
1892	63½–82
1893	60 –69½
1894	40 –52
1895	39–72
1896	40–72
1897	38–60
1898	57–99¾

the latter (see p. 125) to less than $70 in cash. The average earnings for the three years ended June 30, 1898, after deducting all fixed charges, were equivalent to only about 1.3 per cent annually on the $6,000,000 of capital stock. The company at the time of the transfer had outstanding about $7,417,000 of bonds. This large indebtedness, taken in connection with the moderate earnings above shown (even allowing for the fact that they were for years of depression), leaves little doubt that a valuation of $70 per share for the stock is not only liberal, but probably excessive. On this basis its value would be $4,200,000, whereas for this stock, plus $1,050,000 in cash, the Federal Steel Company issued $9,450,000 of its securities.

Lorain Steel Company properties.—For $5,017,800 stock of the Lorain Steel Company of Ohio, and $3,000,000 stock of the Johnson Company of Pennsylvania (this covering the stocks of several subsidiary companies), the Federal Steel Company issued $1,322,200 of its preferred stock, and $1,054,800 of its common stock, together with a cash payment of $2,647,231. It received with these properties $264,455 in cash, which may be considered as reducing the net cash payment to that extent. The total consideration, taking the Federal Steel stocks issued at their par value, would be $4,759,776. A better basis,[1] however, is to take these stocks at the average market prices at which they sold during the first few months after the organization of the Federal Steel Company. (See p. 125.) This would reduce the net total consideration to approximately $4,068,000. As a matter of fact, the original cost of these Lorain properties as stated to the Bureau by the Steel Corporation, was almost exactly $4,000,000. Subsequently, the balance of the stock of the Lorain Steel Company was acquired at par.

Summary.—Accepting the book valuations of the Illinois Steel and the Minnesota Iron companies' stocks, and a valuation of $70 per share for the stock of the Elgin, Joliet and Eastern Railway Company, and allowing $4,000,000 for the Lorain and Johnson concerns, the total indicated value of the property acquired by the Federal Steel Company, including the new cash capital (net), was approximately $62,000,000, as follows:

Table 8.—COMPARISON OF INDICATED VALUE OF PROPERTY (STOCKS AND CASH) ACQUIRED BY FEDERAL STEEL COMPANY AT ITS ORGANIZATION WITH THE AMOUNT OF ITS STOCK ISSUED.

Illinois Steel stock at par, plus surplus	$19, 238, 149
Minnesota Iron stock at par, plus surplus	22, 936, 134
Elgin, Joliet and Eastern stock, at 70 per cent of its par value	4, 200, 000

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[1] The use of market prices of the stock of a consolidation in such computations is as a rule open to objection, as such prices may reflect a value due to the very merger of competing concerns, but in this instance, owing to the comparatively small amount involved, it is permissible, and in any event gives a better basis than the use of the par value.

Lorain Steel Company and Johnson Company stock, estimated value		$4, 000, 000
Cash:		
Syndicate arrangement	$14, 075, 000	
Lorain-Johnson purchase	264, 455	
Total	14, 339, 455	
Less cash paid in connection with Lorain-Johnson purchase	2, 647, 231	
Net cash		11, 692, 224
Total indicated value of assets over bonded indebtedness		[1] 62, 066, 507
Federal Steel preferred stock issued		53, 260, 900
Indicated excess of value over par value of preferred stock alone		8, 805, 607
Total Federal Steel stocks issued, preferred and common		99, 745, 200
Total indicated value of assets over bonded indebtedness		[1] 62, 066, 507
Indicated deficiency of assets, as compared with total stock issued		37, 678, 693

It should be repeated that the above valuations are necessarily somewhat arbitrary and tentative. The earnings of the Illinois Steel Company and the prices of its securities indicate that the book value of that concern was excessive, whereas in the case of the Minnesota Iron Company the book valuation may have been conservative. The value allowed the Elgin, Joliet and Eastern stock probably is excessive, while that assigned the Lorain properties is the approximate cash cost. Taking conditions as they were in 1898, however, the available evidence suggests that an estimate of about $62,000,000, as the value of the properties acquired by the Federal Steel Company, after allowing for underlying bonds, is sufficient. The Bureau has, however, increased this to $63,000,000. This was over and above the bonded indebtedness of these concerns of $30,217,179, which has been considered as representing an equivalent investment.

This conclusion finds further confirmation in the market prices of Federal Steel stocks. Based upon the average prices for the latter part of 1898, the aggregate value of these stocks was approximately but $55,700,000, as follows:

Preferred stock, $53,260,900, at 75.4	$40, 158, 719
Common stock, $46,484,300, at 33.4	15, 525, 756
Total	55, 684, 475

The average prices in 1899 were 82.3 for the preferred stock and 57.4 for the common stock, which give a total valuation for the stock of approximately $70,500,000. The year 1899, however, as already noted, was one of abnormal prosperity in the iron and steel industry. The average prices of the stock in 1900 were 70.3 for the preferred and 42.6 for the common, giving an indicated valuation of both stocks of roughly $57,250,000. Taking the average prices of the stocks for the entire period from the organization of the company in 1898 to the close of 1900, the market valuation was about $61,150,000. An average valuation over so considerable a period is certainly entitled to considerable weight, and particularly because the Federal

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[1] See note 3, Table 5, page 118.

Steel Company was in no sense a monopoly. The close agreement between this valuation and the valuation indicated by the foregoing rough analysis of the property is striking.

From Table 6, on page 119, it appears that stockholders of the Illinois Steel Company, the Minnesota Iron Company, and the Elgin, Joliet and Eastern Railway Company, in return for the deposit of their stocks and payment of $9,251,627 in cash, received $46,258,135 of preferred and $37,006,508 of common stock of the new company. There was issued as part of the purchase price of the Lorain and Johnson companies $1,322,200 Federal Steel preferred and $1,054,800 common stock.[1] There was left for the syndicate, therefore, $5,680,565 of preferred stock and $8,422,992 of common stock in return for $4,823,373 of cash which the syndicate was to furnish in order to make up the stipulated total of $14,075,000. This arrangement may be summarized as follows:

	Preferred stock issued.	Common stock issued.
Total amount	[1] $53,260,900	[2] $46,484,300
Taken by original stockholders and by Lorain interests	47,580,335	38,061,308
Leaving for syndicate	5,680,565	8,422,992

[1] See note 1, page 119.

[2] Includes $3,000 issued to original subscribers, who presumably acted for the underwriting syndicate.

The payment of $14,075,000 in cash was provided as follows:

By original stockholders	$9,251,627
By syndicate	4,823,373
Total	14,075,000

The large residue of stock left in the hands of the syndicate—amounting to $5,680,565 preferred and $8,422,992 common—less the amount of cash ($4,823,373) provided by the syndicate on its own account, constituted the compensation of the syndicate.

This liberal compensation to the underwriting syndicate is very fairly to be considered as sustaining other evidence of extensive overissue of stocks of the Federal Steel Company.

The earnings of the Federal Steel Company likewise tend to the same conclusion. The earnings of the constituent companies for the nine months ending September 30, 1898, after deducting interest on bonds, were officially estimated in a listing application to the New York Stock Exchange at not less than $3,000,000, and those for the full year 1898 at a minimum of $4,000,000. This sum, it will be seen, was equivalent to less than 8 per cent on the $53,260,900 of preferred stock issued. The capitalization of an iron and steel concern under competitive conditions on a basis of 8 per cent undoubtedly must be regarded as extremely liberal. Including the common stock, these earnings were equivalent to only a little more than 4 per cent.

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[1] By this purchase, as already shown, there was secured $264,454.70 in cash; this, however, was in addition to the $14,075,000 above given.

The earnings of the company in 1899, after deducting interest on bonds of constituent companies and depreciation, were approximately $9,100,000. This, it will be seen, was at the rate of approximately 17 per cent on the $53,260,900 of preferred stock outstanding, and about 9 per cent on the preferred and common combined. The earnings in the year 1900 were $11,722,332, or about 22 per cent on the preferred stock alone. These earnings, however, were exceptional. For the first three months of 1901 they were at a very much lower rate.

Altogether, the evidence is strong that a considerable portion of the common stock of the Federal Steel Company represented nothing but "water," or the capitalized hope of future increase in earning power, and indicates that a valuation of $63,000,000, over and above the underlying bonds, at the time the company was organized (September, 1898) is sufficiently liberal.

As shown in Table 4, on page 113, the United States Steel Corporation issued in exchange for the stocks of the Federal Steel Company in 1901 a little over $110,400,000 of its stock, of which, roughly, $60,400,000 was in preferred stock and $50,000,000 in common stock. During the interval from its organization to April 1, 1901, of course, the investment of the Federal Steel Company had, as just shown, been increased from its earnings. The surplus of the company on March 31, 1901, was $18,146,700. Adding this to the original investment in 1898, and excluding any possible appreciation in the value of the property (see p. 168), it is clear that the stock issued by the Steel Corporation for the Federal Steel Company's stocks greatly exceeded the tangible property back of the latter.

Section 5. American Steel and Wire Company.

In the case of this corporation, organized in January, 1899, there is convincing evidence that preferred stock was issued up to the full value of the tangible assets acquired and that the common stock represented nothing but intangible assets, estimated earning power, and "water."

One of the principal companies acquired by the American Steel and Wire Company of New Jersey, the American Steel and Wire Company of Illinois, was itself an important consolidation, and for that reason the basis of its organization may be briefly reviewed.

American Steel and Wire Company of Illinois.—The American Steel and Wire Company of Illinois (see Table 3, facing p. 107) was organized in March, 1898, with a capital of $24,000,000, equally divided between 7 per cent cumulative preferred stock and common stock. The company acquired the following properties:

Consolidated Steel and Wire Company, with 7 plants.

The plants of the I. L. Ellwood Manufacturing Company, and of the Ellwood Wire and Nail Company, at De Kalb, Ill.

The plant of the American Wire Nail Company, at Anderson, Ind.

Two plants of the Salem Wire Nail Company, one at Salem, Ohio, and one at Findlay, Ohio.

The plant of the H. P. Nail Company, at Cleveland.

The plant of the American Wire Company, at Cleveland.

The facts concerning the organization of this company were disclosed in a suit brought in December, 1899, by John H. Parks, one of the promoters, against John W. Gates for an accounting of profits alleged to have been made in its promotion. The valuations at which the above concerns went into the Illinois consolidation (including working capital) and the profits of these concerns, averaged and adjusted over a series of years, as submitted in this Parks suit, are given in the following table:

TABLE 9.—APPRAISED VALUES AND EARNINGS OF CONCERNS COMPOSING AMERICAN STEEL AND WIRE COMPANY OF ILLINOIS IN 1898.[1]

Property.	Appraised value.	Yearly average adjusted profits (1895-1897).
Consolidated Steel and Wire Company, 7 plants (working capital included)	$7,000,000	$1,102,979.20
American Wire Nail Company's plant ($200,000 working capital included)	1,000,000	159,012.45
Salem Wire Nail Company, 2 plants ($100,000 working capital included).	500,000	93,233.21
I. L. Ellwood, 2 plants ($250,000 working capital included)	1,250,000	145,283.26
H. P. Nail Company, plant at Cleveland, Ohio	600,000	77,892.39
American Wire Company, plant at Cleveland, Ohio	600,000	77,154.49
Additional working capital and some small improvements to plants	1,050,000	....
Total	12,000,000	1,655,555.00

[1] As submitted by defense in suit of John H. Parks *v.* John W. Gates, on appeal, supreme court, New York, appellate division, first department.

As already noted on page 76, before the Illinois company was organized an effort was made, in 1897, to form a $75,000,000 consolidation, but this scheme fell through in February, 1898. Almost immediately afterwards the concerns above mentioned were consolidated as the American Steel and Wire Company of Illinois. The valuations placed upon the plants of these companies by engineers employed by J. P. Morgan & Co. at the time the $75,000,000 combination was under discussion were as follows:

Consolidated Steel and Wire Company (this included their plants at Allentown, St. Louis, Rankin, Joliet (2), Cleveland, and Beaver Falls)	$5,914,970
I. L. Ellwood's plants	923,000
American Wire Company plant, at Cleveland, Ohio	740,000
H. P. Nail Company plant, at Cleveland, Ohio	800,000
American Wire Nail Company plant, at Anderson, Ind	700,000
Salem Wire Nail Company plants, at Salem and Findlay, Ohio	450,000
Total	9,527,970

These figures apparently were for the plants alone, without working capital.

In the three years preceding the merger (1895–1897) these companies made a total average profit per year of $1,655,555, showing for those years a net profit of between 13 and 14 per cent if figured on a basis of $12,000,000.

The average profits above given, which were determined by a firm of chartered accountants employed by the bankers, were undoubtedly due in large measure to the exorbitant prices of wire and wire nails maintained by the wire-nail pool during a considerable portion of the period in question. (See p. 73.)

From Table 9, therefore, it appears that the American Steel and Wire Company of Illinois had $12,000,000 of tangible property; that is to say, its $12,000,000 preferred stock was covered by actual tangible assets. The $12,000,000 of common stock was issued as a bonus with the preferred.

The most important of these concerns was the Consolidated Steel and Wire Company. This had a capital stock of $4,000,000, which went into the American Steel and Wire Company of Illinois on the basis of $175 in preferred and a like amount of common for each $100 share of old stock, a total of $14,000,000.[1]

The $12,000,000 common stock of the American Steel and Wire Company of Illinois, while not covered by tangible assets, nevertheless had a value from the standpoint of earning power. This is suggested by the liberal rate of profit as above computed on the $12,000,000 preferred stock alone, namely, about 14 per cent. It is also indicated by the prices of the company's stocks. From July to November, 1898, the common stock of the company was quoted on the New York Stock Exchange at from 25⅛ to 43½, and the preferred from 82 to 92½. Higher quotations were reached in December, but these were undoubtedly due to the pending transfer of the company on very favorable terms to the American Steel and Wire Company of New Jersey. The average prices for the five months in question were about 34 for the common and 88 for the preferred. The combined market value, therefore, was considerably in excess of the par value of the preferred stock. It should be observed, however, that the large earning power of the company was attributable in considerable degree to the fact that it was a combination of some of the strongest factors in the business.

AMERICAN STEEL AND WIRE COMPANY OF NEW JERSEY.—This company was organized in January, 1899, with $90,000,000 capital stock, all of which was issued, as follows:

Preferred stock (7 per cent cumulative)	$40,000,000
Common stock	50,000,000
Total	90,000,000

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[1] Testimony of John W. Gates, in the Parks suit, above cited.

In the organization of this company, the American Steel and Wire Company of Illinois was taken over on very liberal terms, namely, $100 of preferred stock and $60 in common stock of the new company for each $100 preferred stock of the old, and $120 in new common stock for each $100 of old stock. The actual amounts of stock issued by the New Jersey company for the Illinois concern in this exchange were as follows:

	New preferred.	New common.
$12,000,000 old preferred stock received	$12,000,000	$7,200,000
$12,000,000 old common stock received		14,400,000
Total	12,000,000	21,600,000

That is, in exchange for the $24,000,000 stock of the old company there was issued by the new concern $33,600,000.

In addition to the Illinois company, the American Steel and Wire Company of New Jersey secured most of the other important wire concerns of the country. Most of these are given in Table 3, facing page 107.[1] An underwriting syndicate was to provide $28,000,000 cash, of which $15,000,000 was to be used to purchase these additional concerns and the remaining $13,000,000 was to be turned over to the company as working capital. Adding to this $28,000,000 the $12,000,000 tangible property of the American Steel and Wire Company of Illinois at its organization, makes a total of $40,000,000, which is exactly the amount of preferred stock issued by the New Jersey company.

In the case of the properties purchased with the $15,000,000 cash provided by the underwriting syndicate, the good will was also secured, since the cash price included these properties as going concerns. This alone would suggest that part of the $40,000,000 preferred stock of the new company was issued for intangible assets. On the other hand, the common stock of the American Steel and Wire Company of Illinois, by the time of its transfer to the New Jersey company, may have been partly covered by tangible value. It seems reasonably certain that the $40,000,000 preferred stock of the latter concern was covered by actual property, including working capital.

That preferred stock was issued by the American Steel and Wire Company of New Jersey up to the full amount of tangible assets is, moreover, indicated by the following excerpt from an article in a trade journal at the time:[2]

> The syndicate of bankers furnishes the capital to make the purchases of the plants and to provide the new company with a

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[1] See note at head of that table.

[2] Iron Age, January 12, 1899, page 19.

> working capital of about $13,000,000, exclusive of the working capital of the concerns who enter the consolidation. As a matter of fact, the new company will have a working capital of $17,342,500, less $750,000 bonds, as above. Whatever may be necessary of this working capital may be used for the purchase of other properties, which may be agreed upon hereafter. The entire amount of capital to be furnished by the syndicate will be $28,000,000.
>
> The aggregate valuation of the plants which are included in the new consolidation is $23,407,500.

It will be seen that this statement, which appears to be authoritative, gives the entire working capital of the new company (including the $13,000,000 clear cash to be provided by the syndicate) at $17,342,500, less $750,000 of bonds to be provided for, which leaves a net cash capital of $16,592,500. This sum, added to the reported value of the plants, $23,407,500, amounts to exactly $40,000,000, which is precisely the amount of the preferred stock issued by the American Steel and Wire Company of New Jersey. While the value of the plants may have been arrived at by deducting the amount of working capital from the preferred stock, this statement, in connection with other evidence, seems to indicate beyond a reasonable doubt, in so far as it was authoritative, that it was the intention of the organizers to issue preferred stock up to the full amount of plant valuations and cash assets, and that the common stock at best represented nothing but intangible assets. Much of it must be considered as mere "water."

Subsequent acquisitions.—Shortly after its organization, the American Steel and Wire Company of New Jersey acquired several other properties. Most of these were comparatively small, with the exception of the Shoenberger Steel Company of Pittsburg, which was capitalized at $3,600,000, and which had an extensive plant. All of these later acquisitions were paid for in cash, and therefore it is reasonable to assume that they did not involve serious overvaluation.

The company did, however, in 1900, guarantee an issue of $5,630,000 of 5 per cent 20-year bonds of the American Steamship Company, of which $5,250,000 were issued in payment for the $3,000,000 capital stock of that concern (at the rate of $175 per share) and $380,000 reserved to retire prior liens. The property back of these bonds consisted of 12 steamers. The value of these as fixed by the Inland Lloyds was only $3,035,000, or practically $2,600,000 less than the bonds issued against them. In justification of the high price paid by the Steel and Wire company, it was contended that the net earnings of this steamship fleet were very large. This was true, the earnings in 1900 (not all of the steamers being in operation for the entire season) amounting to roughly $762,000, or more than 13 per cent upon the total indebtedness of $5,630,000 incurred by the American Steel

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and Wire Company in the acquisition of these vessels. However, this transaction precipitated a violent controversy in the management of the Steel and Wire company, because the stock of the steamship company had previously been owned by some of the leading directors and stockholders of the Steel and Wire concern, who had originally acquired the property at the equivalent of about par for the stock, which they later sold for $175 per share. Moreover, the steamship company had paid very liberal dividends during the interval that it had thus been operated by these parties, so that their total profit on the steamship deal was apparently in excess of $3,000,000, the bulk of which went to a comparatively few insiders in the American Steel and Wire Company's management. At least one director of the Steel and Wire company, it may be noted, resigned because of dissatisfaction over this transaction.[1]

Taking all the evidence into consideration, therefore, it appears that at the organization of the American Steel and Wire Company of New Jersey there were no tangible assets back of the $50,000,000 common stock, and that the issue of bonds to acquire the American Steamship Company's stock was in excess of the appraised value of the vessels acquired (this appraisal presumably not including an allowance for earning power).

The bulk of the common stock undoubtedly was nothing but "water." In this connection it may be noted that no less than $11,600,000 of the common stock was distributed among a few leading interests who managed the underwriting. As shown on page 130, $12,000,000 of the $40,000,000 preferred stock of the company and $21,600,000 of its common stock was issued for the stock of the American Steel and Wire Company of Illinois. This left $28,000,000 preferred stock and $28,400,000 common stock of the New Jersey concern which was disposed of to a syndicate for $28,000,000 in cash. The syndicate subscribers received a bonus of 60 shares in common stock with each 100 shares of preferred taken at par. This left 40 shares out of each 100 shares of common, or $11,600,000, as a "commission" for those managing the organization of the company.[2]

This large "commission" is very convincing evidence that the common stock of the company was heavily "watered."

The common stock of the company, however, had a value from the standpoint of earning power. For the year 1899 the surplus earnings of the Steel and Wire company, after the dividends on the preferred stock, and after setting aside $1,200,000 for depreciation and bad debts, were $9,362,530. This was equivalent to 18.7 per cent for the common stock. The corresponding surplus profits for the year 1900 were $4,202,129, or 8.4 per cent for the common stock. Moreover, dividends were paid on the common stock out of the earnings of 1899 at the rate of 7 per cent and out of those for 1900 at the rate of 5 per cent.

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[1] Hermann Sielcken, one of the directors who resigned, was quoted at the time as saying (Chronicle, Dec. 15, 1900):

> I confess myself unable to understand why the American Steel and Wire Company, professing to have $90,000,000 of capital, should issue $5,000,000 [$5,630,000] in bonds for the purchase of 12 ore steamers when 12 new boats of the same tonnage could today be contracted for and delivered in the spring of 1902 for between $3,000,000 and $3,300,000, and there is plenty of tonnage to be had for the intervening season. Seventy-five per cent of the American Steamship Company's stock was right there in the American Steel and Wire directors' meeting. Of course I resigned.

[2] The common stock was, of course, worth much less than par.

On March 31, 1901, the accumulated surplus of the company was $13,162,106. To this extent, therefore, assuming the allowance for depreciation to have been adequate, the " water " in the common stock had been reduced. In other words, at the time of the transfer of the Steel and Wire company to the Steel Corporation its tangible property alone was considerably in excess of the $40,000,000 preferred stock.

Undoubtedly the organizers of the United States Steel Corporation considered the earning capacity of the company more carefully than they did its tangible assets. Therefore, it should be pointed out that the earnings above noted, particularly those for 1899, were due in large measure to the extraordinarily prosperous condition of the iron and steel industry at this period. Obviously, exceptional earnings made under these conditions are not alone a proper basis for capitalization. A more important matter, and one which undoubtedly received more attention in the organization of the Steel Corporation, was the high degree of control over the wire and nail industry enjoyed by the American Steel and Wire Company, which undoubtedly had an important influence upon the earning capacity of the company. While the Steel Corporation could not, perhaps, reasonably expect to make such large earnings from the wire and nail business as the American Steel and Wire Company had made in 1899, nevertheless the high degree of monopolistic control of this branch of the industry which it obtained through the acquisition of this company gave it virtual assurance that a liberal rate of profit could be earned so long as this control was maintained.

Section 6. American Tin Plate Company.

This company was one of the first of the great iron and steel consolidations, having been organized in December, 1898. Its total authorized capitalization was $50,000,000, of which $46,000,000 was issued at the time, as follows:

Stock.	Authorized.	Issued.
Preferred (7 per cent cumulative)	$20,000,000	$18,000,000
Common	30,000,000	28,000,000

Soon after its organization the company issued $325,000 additional preferred stock to acquire another concern. As shown in Table 4, on page 113, the United States Steel Corporation, in acquiring the Tin Plate company, issued practically $63,500,000 of its stock ($28,505,250 preferred and $34,993,750 common). Thus the increase in capitalization was, roughly, $17,000,000.

The American Tin Plate Company was one of the group of four "Moore" companies, namely, the American Tin Plate Company, the National Steel Company, the American Steel Hoop Company, and the American Sheet Steel Company, so called because they had been organized chiefly by W. H. Moore.

All of these companies were heavily overcapitalized. In fact, the evidence very clearly shows that the common stocks of these companies originally had no tangible property whatever back of them. This was indeed very frankly admitted by Mr. Moore, in testimony before the Industrial Commission on the organization of the American Tin Plate Company, as the following excerpt from that testimony shows:

> Everybody knows what they are getting when they get common stock. They know they are not getting anything that represents assets.[1]

Evidence as to the "watering" of these companies, however, does not rest simply on this general statement, but is borne out by various other more specific facts.

In the case of the American Tin Plate Company, the testimony of several of its officers before the Industrial Commission showed clearly that options were obtained upon the various properties and that the vendors were then given the privilege of taking the full option price in cash or of receiving instead preferred stock equal to the amount of such cash valuation, with a bonus of 100 per cent in common stock in addition.

The organizers of the company also raised $4,500,000 of cash capital; this was obtained from the sale of preferred stock at par, subscribers in this case also receiving an equal amount of common stock as a bonus. A part of this cash was used in the purchase of inventories and other working assets of the acquired concerns, such liquid assets not being included with the transfer of plants.

The cash valuations agreed upon for the various plants covered these as going concerns, and therefore included intangible as well as tangible considerations. This is clearly established by the following excerpt from the testimony of D. G. Reid, president of the company, before the Industrial Commission:

> Q. If a man had got an option on a plant for $100,000 in cash, he could take that cash and quit business?—A. Yes.

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[1] Industrial Commission Reports, Volume I, page 963.

> Q. If he preferred to take instead of cash $100,000 worth of preferred stock and a $100,000 in common stock, he could do that?—A. Yes; Judge Moore would let him have it.
>
> Q. The price, then, that Judge Moore and these tin-plate manufacturers agreed upon was on a cash basis, and that would include, would it not, the value of the plant and the value of the business in general?—A. Good will and all.
>
> Q. The good will and all?—A. Yes.
>
> Q. So that, as a matter of fact, the price that was agreed upon, the cash price agreed upon, would mean both the value of the plant itself and the good will?—A. Certainly; yes.[1]

The plants of the constituent concerns, plus the new working capital, represented the total tangible property acquired by the American Tin Plate Company. From what has just been stated, therefore, it is clear that preferred stock was issued up to the full amount of the cash value of the property acquired by the new company, and that the common stock was issued merely as a bonus with the preferred, or, as shown elsewhere (see p. 178), for promoters' profits and organization expenses.

That preferred stock was issued up to the full cash value of the property is indicated by the following further excerpt from the testimony of Mr. Reid before the Industrial Commission, already referred to:

> Q. Did you not consider that the preferred stock practically paid for the plants, for the tangible property?—A. As I have already said, Judge Moore paid for the plants in cash. It was a cash transaction. However, if an owner of tin-plate property would come to him and say, "I do not care for mine in cash; I will take so many shares in stock," he would get from him a share of common and a share of preferred stock for each $100 that he did not take out in cash.
>
> Q. No matter how many transactions were involved in it, and by what circumlocution it was brought about, as a matter of fact, did you not consider generally that the preferred stock paid for the tangible property that was acquired?—A. Well, if a mill had $100,000 cash coming to it from Judge Moore and he gave them $100,000 in preferred and $100,000 in common stock, that man would know that he was getting preferred stock for his $100,000, and whatever he got beyond might be said to be so much bonus.[2]

It should be noted that while the $28,000,000 common stock issued by the American Tin Plate Company represented at the time nothing but "water," by April, 1901, this common stock had considerable value as a result of the great earning power of the company. The earnings of the constituent concerns of the Tin Plate company for the year 1898—that is, for the year preceding their consolidation, when they were operating separately—were officially stated in a listing application of the company to the New York Stock Exchange at $2,000,000. This was equivalent to about 11 per cent on the preferred stock issued by the consolidated company. The earnings of the company in the year 1899 were approximately $3,600,000, and those for the year 1900 exceeded $5,750,000. The accumulated surplus on March 31, 1901, was $6,177,537, so that to some extent the common stock of the company had actual cash assets back of it at that date.

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[1] Industrial Commission Reports, Volume I, page 884.

[2] Industrial Commission Reports, Volume I, pages 883–884.

As in the case of the American Steel and Wire Company, it is important to point out that the great earning power of the American Tin Plate Company was largely attributable to two circumstances—first, the extraordinary prosperity of the iron and steel industry at this time, and, second, to the very effective control of the tin-plate business which that company held. As already shown, the company at its organization had an almost complete monoply of the tin-plate business. Shortly after this, moreover, the company entered into agreements with leading manufacturers of tin-plate machinery with a view to hindering the development of competition, and in this it was for a time partially successful. The monopolistic position of the company in its branch of the steel industry, therefore, obviously made its acquisition particularly desirable, from the standpoint of the Steel Corporation, since a liberal profit in this department of the business was virtually assured.

From what has been said it would appear that the value of the property, tangible and intangible, acquired by the American Tin Plate Company at its organization in December, 1898, did not exceed $18,325,000, the amount of the preferred stock issued—this including the $325,000 additional preferred stock issued shortly after the company commenced business. While the investment by April 1, 1901, had been increased somewhat by the reinvestment of surplus profits, there can be no reasonable doubt that the issuance by the United States Steel Corporation of approximately $63,500,000 of its stock for the property of the American Tin Plate Company meant that many millions of this stock were issued for intangible considerations, while many millions more represented nothing but mere "water."

Section 7. National Steel Company.

The capitalization of this company at its organization, in February, 1899 (exclusive of $1,000,000 preferred stock issued somewhat later), was as follows:

Stock.	Authorized.	Issued.
Preferred (7 per cent cumulative)	$27,000,000	$26,000,000
Common	32,000,000	32,000,000
Underlying bonds		2,561,000

Testimony of William E. Reis, president of the company, before the Industrial Commission in October, 1899, showed that the company had been organized along substantially the same lines as the American Tin Plate Company and the American Steel Hoop Company; that is to say, the former owners of the properties acquired were given the option of taking a cash price or of taking part or all of the payment in stock of the new company. Where payment was taken in stock, preferred stock was given up to the amount of the cash option price, and 100 shares of common stock were given with each 100 shares of preferred. It will be noted that the authorized amount of common stock exceeded the amount of the preferred by $5,000,000. This excess went to the promoters. The following excerpt from the testimony of Mr. Reis is in point:[1]

> We [the owners of the constituent concerns] gave an option in this way: We gave an option for cash with the privilege to take all cash, or part cash and part stock, or all stock, at our option. We exercised the option at the completion of the company and took all stock.
>
> Q. At what rates was the stock taken?—A. We took one share of preferred stock for each $100 of cash [value], and with each share of preferred stock we got one share of common; so we got a share each of preferred and common for each $100 of value.

Preferred stock, with an equal bonus of common stock, was likewise issued for the working capital, of which the company had about $9,000,000 when it commenced business.

It appears, therefore, that the total cash value of the property and cash assets acquired by the company at its organization, over and above its underlying bonds, did not exceed the $26,000,000 preferred stock issued. It is probable that the cash prices were chiefly determined by the value of the tangible assets alone.

Later in 1899 the company issued $1,000,000 of its preferred stock to acquire certain property of the Oliver & Snyder Steel Company, this purchase including a blast furnace, a tract of 803 acres of coking-coal lands, and a 10-year contract for the production of 700 coke ovens of the Oliver & Snyder concern, as well as a contract for a one-sixth share of the ore production of the Oliver Iron Mining Company. The transaction involved the assumption of $250,000 underlying bonds on the furnace property. In view of the substantial consideration acquired, however, it seems entirely reasonable to assume that there was no overvaluation in this additional issue of preferred stock.

From time to time as the company extended its investments, particularly in ore and steamship property, it incurred further indebtedness, the total at the time of its absorption by the United States Steel Corporation being about $7,000,000.

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[1] Industrial Commission Reports, Volume I, page 944.

From what has been said it appears that the $32,000,000 common stock of the National Steel Company originally represented nothing but earning power and "water." The company was, however, one of the most successful of the large iron and steel consolidations, and its great earning power unquestionably gave a value to the common stock aside from any consideration of tangible property. The earnings of the company in the first year of its operations, after deducting interest charges, were approximately $8,750,000, or 32½ per cent on the preferred stock. The directors, however, wrote off $3,617,000 as depreciation, so that the net surplus at the close of February, 1900, after allowing for the full year's dividend on the preferred stock, was about $3,233,000, or a little over 10 per cent on the common stock. During the period from March 1, 1900, to April 1, 1901, when the company was acquired by the Steel Corporation, it made further large earnings, and the undivided surplus on April 1, 1901, amounted to $6,910,995. This addition to its investment, however, as pointed out in the case of the American Tin Plate Company, was undoubtedly a less important consideration from the standpoint of the Steel Corporation than the great earning capacity of the company. This earning capacity was largely due to the great increase in prosperity in the industry as compared with the period prior to its organization, but was also probably due in some measure to the influence of consolidation, although the National Steel Company had no monopoly of the products which it handled, as the American Tin Plate Company had. On the other hand, owing to its close affiliation with the American Tin Plate and American Sheet Steel companies, it had a more or less exclusive market for a considerable part of its production of crude and semifinished steel (billets, bars, etc.), and this may have had an important bearing upon its earning capacity.

As shown in Table 4, on page 113, the United States Steel Corporation issued roughly $73,700,000 of its stocks for $26,992,200 preferred and $31,969,800 of the common stock of the National Steel Company, or at the rate of $125 of its preferred for every $100 of National Steel preferred and $125 of its common for every $100 National Steel common.

Section 8. American Steel Hoop Company.

The American Steel Hoop Company was organized in April, 1899, with the following authorized capitalization, all of which was issued:

Preferred stock (7 per cent cumulative)	$14,000,000
Common stock	19,000,000
Total	33,000,000

The organization of the company was conducted by W. H. Moore in connection with New York bankers. C. S. Guthrie, then president of the company, in testimony before the Industrial Commission in October, 1899, said that the organization of the American Steel Hoop Company, the American Tin Plate Company, and the National Steel Company was "substantially the same in every respect." This means that the promoters determined upon a cash valuation of the plants, and then gave the vendors the option of taking cash or of taking preferred stock up to the amount of such cash valuation of the property, with an equal amount of common stock thrown in as a bonus. Moreover, in view of what has already been said in the case of the Tin Plate and National Steel companies, the above statement of President Guthrie indicates that the cash valuation covered intangible as well as tangible considerations. In other words, all of the common stock of the company at its organization was nothing but "water," or the capitalization of future hopes.

It will be noted that the issue of common stock exceeded that of the preferred by $5,000,000. This went to the promoters for "organization expenses."

The company at its organization had a cash working capital of about $3,000,000.

Not only was the common stock issued as a mere bonus, but it is a fair question whether the preferred stock of the American Steel Hoop Company was fully covered by property value. The earnings of the company during the first nine months of its organization amounted to $720,000. This is at the rate of less than 7 per cent per year upon the $14,000,000 preferred stock. The earnings of the next year, however, were decidedly larger, but the accumulated surplus of the company on March 31, 1901, was only $1,660,311.

A further indication that the preferred stock may have included some "water" is found in the market quotations of the company's stocks, which in the main sold at relatively much lower prices than those of several of the other companies previously discussed.

As already shown, the preferred stock of the company was exchanged at par for preferred stock of the Steel Corporation, and the common stock at par for the common stock of that concern.

Section 9. American Sheet Steel Company.

This consolidation, which has already been referred to on page 91, apparently was organized on the same general lines as were followed in the case of the other "Moore" companies; that is, the promoters determined upon the cash valuation for the plants to be acquired, and then gave the vendors the option of taking payment in cash or in preferred stock up to the full amount of the cash valuation with a bonus of 100 per cent in common stock. The cash working capital was raised on the same terms.

The plan of organization in the case of the American Sheet Steel Company, however, was somewhat different from that in the case of the American Tin Plate, National Steel, and American Steel Hoop companies, as above described, in that the amounts of common and preferred stock were identical. These amounts were as follows:

Stock.	Authorized.	Issued.
Preferred (7 per cent cumulative)	$26,000,000	$24,500,000
Common	26,000,000	24,500,000
Underlying bonds		2,000,000

In the case of the three other "Moore" companies, it will be recalled, there was an excess of common stock over the preferred, all of which was issued to the promoters for organization expenses and their profits. There can be little doubt that the promoters likewise received a large amount of stock in the case of the American Sheet Steel Company. Indeed, it seems probable that in addition to receiving a block of common stock they received a substantial block of preferred stock as well.

In this connection it may be noted that the Iron Age, in discussing the organization of the company in its issue of February 22, 1900, about the time the negotiations were being consummated, stated that $4,000,000 of preferred stock and the same amount of common stock were to be issued for cash, while $12,000,000 preferred and $12,000,000 common were to be issued for the plants that were going into the consolidation. This article stated that the remaining $10,000,000 of each class of stock would be retained in the treasury, whereas instead, as shown above, all but $1,500,000 of each class of stock was issued.

If the above statement were correct, it would appear that the total property value acquired by the company was $16,000,000 ($4,000,000 cash and $12,000,000 in plants) and consequently that the remaining $8,500,000 of preferred, as well as all of the common stock, may have been issued either as a bonus or as a compensation to the organizers. This, however, can not be definitely stated; the organizers of the company, when questioned by the Bureau, declined to discuss the amount of the promoters' commission, professing to have no records or recollection as to its amount.

It is certain, however, that preferred stock was issued by the American Sheet Steel Company in excess of any fair valuation of the property, including cash capital. The company at its organization acquired 164 sheet mills, several open-hearth furnaces and bar mills, as well as 19 puddling furnaces. An allowance of $40,000 as the value of an ordinary mill (including land for the site) at that time would undoubtedly be liberal, so that the total value of the 164 mills acquired would be only about $6,500,000. The additional plants of the company could not have been worth more than a few million dollars. The Bureau has, therefore, valued the plants of this concern at $12,000,000, allowing $1,000,000 more for detached real estate, and has valued its natural-gas property at $2,000,000 (see p. 185), and the working capital at $4,000,000, a total of $19,000,000; against this, however, should be placed the bonded debt of $2,000,000.

In this connection it may be noted that in 1900 the common stock of the company (as quoted in the Pittsburg market) did not sell above 23, while it sold as low as 15; the highest for the preferred stock in that year was 76¾ and the lowest 55. Taking the highest quotations of the two stocks together the sum is a little less than the par of the preferred stock alone, while at the lowest quotations one share of preferred and one share of common together were worth but 70. These low prices are very good evidence of unusually heavy overcapitalization in the case of this company, and particularly as this was a period of high prices for sheet-steel products. In the early part of 1901 the prices of these stocks advanced sharply, but this undoubtedly was due to the prospective organization of the United States Steel Corporation.

The earnings of the company for the period from March 29, 1900, the date of its organization, to December 31 of that year, were only $564,543; in the first three months of 1901, they were $1,111,937, but the surplus of the company on March 31, 1901, was only $705,757, showing that the company had made only an unimportant increase in its investment from operations.

As already shown, the Sheet Steel stocks were taken over by the Steel Corporation at par in new preferred and new common, respectively.

Section 10. National Tube Company.

The capitalization of this company at its organization in 1899 consisted of $40,000,000 of 7 per cent cumulative preferred stock and $40,000,000 common stock, practically all of which was issued.

The company was organized along lines substantially similar to those adopted in the case of the American Steel and Wire Company; that is, preferred stock was issued up to the full amount of the tangible assets, including working capital, while the common stock was issued as a bonus with the preferred and for organization expenses and promotion services. It appears that $50 of the common stock were thus issued with each $100 of preferred for each $100 of property value or cash acquired. The remaining 50 per cent of the issue of common stock appears to have gone to the promoters for organization expenses and their profit.

According to an official statement filed with the New York Stock Exchange, the company commenced business on July 1, 1899, with net current assets of approximately $16,100,000. Deducting this amount from the $40,000,000 of preferred stock issued would leave approximately $24,000,000 to represent the plants acquired.

The most important companies acquired were the National Tube Works Company, with plants at McKeesport and Pittsburg, Pa., and the Riverside Iron Works, with plants at Wheeling and Benwood, W. Va., and Steubenville, Ohio. A balance sheet of the National Tube Works Company as of July 1, 1899, gave the plants at $8,118,000 and the net current assets at $6,086,000, a total of more than $14,000,000. It is probable, however, that this balance sheet valuation was excessive. A special reason for this conclusion is that not long after the properties were transferred to the United States Steel Corporation in 1901, it was found necessary to reconstruct to a very large extent the plants of the National Tube Works Company. (See p. 266.)

The balance sheet of the Riverside Iron Works as of July 1, 1899, gave the plants at $1,943,000 and other net assets at $2,200,000.

Assuming that the plants of the two concerns were worth the sums at which they were entered on the balance sheets ($10,061,000), and accepting the value of all the plants acquired by the National Tube Company at $24,000,000, would leave $13,939,000 for the remaining plants acquired.

The remaining plants were those of the following companies:

Pennsylvania Tube Company, Pittsburg, Pa.
Oil City Tube Company, Oil City, Pa.
National Galvanizing Works, Versailles, Pa.
Syracuse Tube Company, Syracuse, N. Y.
Delaware Iron Company, New Castle, Del.
Allison Manufacturing Company, Philadelphia, Pa.
Cohoes Tube Works, Cohoes, N. Y.
Ohio Tube Company, Warren, Ohio, and Morristown, Pa.
American Tube and Iron Company, Middletown, Pa., and Youngstown, Ohio.
Chester Pipe and Tube Company, Chester, Pa.
Oil Well Supply Company, Pittsburg, Pa.

These smaller plants entering the consolidation had an annual capacity of about 650,000 tons of iron and steel wrought pipe, which, based upon a valuation of $13,939,000, would be equivalent to approximately $20 per ton capacity.

The aggregate capacity of the National Tube Works and the Riverside Iron Works in finished products was about 350,000 tons, which, on the basis of $10,061,000 as the value of their plants, would give an average of about $30 per ton. These two companies, however, had, in addition to finishing mills, blast furnaces and steel works, while the Riverside Iron Works had some coal property as well. A higher average price per ton of capacity, therefore, would naturally have been paid for these two principal concerns than for the smaller concerns just enumerated.

In this connection it may be noted that the original agreement for the organization of the National Tube Company contemplated the purchase of several other tube concerns generally similar to the group of 11 just mentioned, but that in the final organization of the company these were omitted. In lieu of transferring these companies, the organizers of the company agreed to pay the National Tube Company $2,500,000 in cash. The capacities of the plants thus omitted aggregated about 150,000 tons of pipes and tubes. On this basis, the cash payment or forfeit of $2,500,000 would be equivalent to about $17 per ton as compared with an indicated valuation of $20 per ton for the group of 11 concerns above enumerated. While such a comparison is necessarily arbitrary, it tends to show that an allowance of approximately $14,000,000 for the 11 plants in question is sufficiently high.

The available evidence, therefore, indicates that the common stock of the National Tube Company at its organization was of practically the same sort as the common stocks of most of the other large consolidations discussed in this chapter; that is, that it was not represented by actual property values.

The National Tube Company, however, was one of the most successful of the constituent concerns of the United States Steel Corporation, and by the time that it was acquired by the latter its common stock had a high market value because of the company's earning power. For the year ended June 30, 1900, the profits of the company, after deducting all expenses, exceeded $14,600,000, and after deductions for depreciation, bad debts, etc., the net earnings were $13,878,000. This, it will be seen, was at the rate of nearly 35 per cent on the $40,000,000 of preferred stock outstanding, and at the rate of 17 per cent on the total capitalization of $80,000,000. After allowing for the full 7 per cent dividend on the preferred stock, the remaining surplus earnings were equivalent to 28 per cent on the common stock. From the standpoint of the United States Steel Corporation, therefore, the common stock of the National Tube Company had a considerable value regardless of the extent to which it was covered by tangible assets. It may be noted, moreover, that on April 1, 1901, the company's books showed a surplus of $27,484,569, so that at that date the common stock had a very considerable amount of tangible assets back of it as well as earning power.

The earnings of the company for the fiscal year 1900 undoubtedly reflected the unusual prosperity of the period and therefore were not a proper basis for judging the value of the property under ordinary conditions. However, the National Tube Company substantially dominated its branch of the steel industry. In a listing application to the New York Stock Exchange in February, 1900, the company stated that it had fully 90 per cent of the country's capacity of tubular goods. As already shown, this appears to have been an overstatement, and 75 per cent seems a more accurate figure. This, however, made it the dominating factor in this branch of the industry.

As shown in Table 4, for $79,934,800 stock of the National Tube Company the Steel Corporation issued $103,432,991 of its stock, an increase, therefore, of $23,498,191.

Section 11. Shelby Steel Tube Company.

This was a New Jersey company with $15,000,000 authorized capital stock ($6,000,000 preferred and $9,000,000 common), formed in 1900 as a reorganization of the Shelby Tube Company of Pennsylvania, a $10,000,000 concern.

It is probable that the common stock of the reorganized company was little more than "water." This is indicated by the details of the reorganization given in the accompanying footnote,[1] and also by the quotations of the company's securities on the Chicago Stock Exchange, which were as follows in the years 1900 and 1901:

Year.	Preferred stock.		Common stock.	
	Highest.	Lowest.	Highest.	Lowest.
1900	86	38	27	5
1901	58	30	15	6

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[1] The scheme of reorganization is indicated by the following excerpt from an article in the Economist of Chicago in its issue of February 10, 1900, which appears to have been taken from a prospectus:

	Authorized.	Issued.
Preferred stock	$6,000,000	$5,000,000
Common stock	9,000,000	8,150,000
Total	15,000,000	13,150,000

	Preferred.	Common.
Issued to subscribers at par for preferred	$1,311,800	$1,311,800
To acquire capital stock ($7,376,400) of present [the Pennsylvania corporation] company on basis of 50 per cent in new preferred and 75 per cent in new common	3,688,200	5,532,300
Balance for fees, expenses, organization, etc		1,305,900
Total issue	5,000,000	8,150,000

The exact amount of "water" in the stock is a matter of minor importance, however, since the United States Steel Corporation in acquiring the stocks of the Shelby Steel Tube Company effected a very drastic reduction in capitalization. These stocks were acquired on the following terms: One share of United States Steel preferred for each 2⅔ shares of Shelby Steel Tube preferred; 1 share of United States Steel common for each 4 shares of Shelby Steel Tube common. In other words, the Shelby Steel Tube preferred received 37½ per cent in United States Steel preferred, and the Shelby Steel Tube common 25 per cent in United States Steel common.

At that time (June, 1901) United States Steel preferred stock was selling about par, and the common stock at about 50. Had the entire amount of Shelby Steel Tube stock been exchanged, and the United States Steel shares received therefor sold at these average prices, the net cash return to Shelby Steel Tube stockholders would have been as follows:

50,000 shares of Shelby Steel Tube preferred would have received 18,750 shares of United States Steel preferred, which at par would have been worth	$1,875,000
81,515 shares of Shelby Steel Tube common would have received 20,378 shares of United States Steel common, which at 50 would have been worth	1,018,900
Total	2,893,900

As a matter of fact, not all the stock of the Shelby concern was immediately exchanged. The exact amounts exchanged during 1901 are given in Table 4, on page 113. However, in this rough estimate of the total value of the Shelby concern, the entire amounts of its stock should be taken into consideration.

While this total of $2,893,900 does not necessarily indicate the exact cash value of the Shelby Steel Tube concern, it may fairly be said to represent the approximate cost of the Shelby Steel Tube property to the Steel Corporation, reduced to a cash basis. (See note, p. 124.)

Through the acquisition of this concern the Steel Corporation established its supremacy in the seamless tubing branch of the steel industry.

Section 12. American Bridge Company.

This company was incorporated in May, 1900. Its authorized and issued capitalization at the time of its organization were as follows:

Stock.	Authorized.	Issued.
Preferred (7 per cent cumulative)	$35,000,000	$30,527,800
Common	35,000,000	30,527,800

By the time the company was acquired by the United States Steel Corporation the outstanding preferred stock had been increased to $31,373,800 and the common stock to $30,950,800.

The promotion of this company was handled by I. Gifford Ladd, of Providence, R. I., who was to receive, in consideration of the transfer of the various properties to the Bridge company, $20,499,000, par value, of its preferred stock, and $34,999,000, par value, of its common stock, together with the sum of $5,500,000 in cash ($1,000, par value, of the preferred stock, and $1,000, par value, of the common stock, was issued to the original incorporators for cash). However, as a part of the transaction Mr. Ladd agreed to purchase the remaining $14,500,000 of preferred stock, which was to be issued for cash at par. In other words, leaving out of consideration the small amount of incorporators' stock, the entire $35,000,000 of preferred stock and $35,000,000 of common stock which it was originally proposed to issue were to be delivered to the promoter in return for the properties, plus $14,500,000 in cash, from which gross amount of cash, however, $5,500,000 was to be turned back to the promoter, apparently to purchase certain concerns which were not ready to take stock or which demanded a part of the payment in cash. The promoter having been unable to deliver nine of the properties the purchase of which was originally contemplated, surrendered under abatement arrangement $4,772,200 of preferred stock and an equal amount of common stock, thus making the total amount of each class originally issued $30,227,800; this was shortly increased to $30,527,800 of each class.

The precise arrangement between the promoter and the various vendors is not definitely known, but it appears that in most cases the vendors were allowed 100 per cent of the cash valuation of their plants in preferred stock, with a large bonus in common stock. It may be noted that the promoter sold $14,500,000 of preferred stock to bankers for cash at par, allowing them as syndicate managers a bonus of $7,250,000 in common stock as their commission, and allowing the participants in a syndicate to be organized by these bankers a further amount in common stock equivalent to 30 per cent of any sums which these syndicate participants should be actually called upon to pay in cash. It seems probable that this arrangement was made in order to relieve the promoter from the necessity of raising the large amount of cash.

Of the $14,500,000 total cash capital provided, approximately $12,670,000 was expended for plants and for working capital, this amount including the $5,500,000 paid to the promoter. This left a net cash balance on hand of $1,832,000. The amount of working assets thus acquired (as distinct from plants) was approximately $9,700,000, the balance of the original cash presumably being used in the purchase of plants. The total cash and cash capital for working purposes provided the company was, therefore, approximately $11,500,000. Deducting this from the amount of preferred stock originally issued ($30,527,800) leaves a balance of approximately $19,000,000 for the plants originally acquired, to which should be added preferred stock subsequently issued, amounting to about $850,000, making the grand total of tangible assets acquired $31,374,000, and of the plants alone $19,874,000.

On March 31, 1901, the American Bridge Company had a surplus of $4,030,331. As shown in Table 4, the preferred stock received 110 in United States Steel preferred and the common stock 105 in United States Steel common.

Section 13. Lake Superior Consolidated Iron Mines.

This company was organized under New Jersey laws in 1893, with an authorized capital of $30,000,000, all common stock, of which about $25,000,000 was issued at the time. At the date of its absorption by the United States Steel Corporation, in April, 1901, the outstanding stock of the company was $29,424,594. The company at one time created a mortgage of $10,000,000, under which about $1,500,000 in bonds were issued. These were subsequently redeemed, and in 1898 the mortgage was canceled.

The company was a consolidation of the mining properties of the Wetmore, Merritt, and Rockefeller interests, but was commonly known as a Rockefeller concern. The Wetmores and the Merritts, in the development of their mining properties and the Duluth, Missabe and Northern Railway, had become heavily indebted to the Rockefeller interests, with the result that when the panic of 1893 occurred they were practically bought out by the latter.

Such meager evidence as is available as to the organization of the company indicates that it was capitalized on an extravagant basis. One report at the time made it appear that the mining properties on the Mesabi Range went in on a basis of about $17,000,000, and the railroad and its ore docks at $2,000,000; in addition there were mines in Michigan and Wisconsin, and elsewhere. These figures can not be considered as reliable, but there can be no doubt that by far the greater part of the $25,000,000 stock originally issued was for the mining properties in the Mesabi district. It may be noted that the Iron Age, in discussing the company in its issue of December 26, 1895, stated:

> Owing to some circumstances connected with the formation of this company, * * * it is difficult to separate the cost of these mines from that of the money paid for the road, which is also one of the properties of the corporation. It is safe to assume that $1,500,000 has paid for all the so-called Merritt properties put into the Consolidated, and to cover all expenses connected with their admission into the company. These properties, some

> of which are fee and some lease, are believed by the most conservative to contain not less than 70,000,000 tons of ore, considerable of which is, naturally, non-Bessemer. In addition to these the company have the Adams mine, the recent purchase from the Roucheleau-Ray Company, the Lake Superior and the McKinley. These have been gathered in at a cost of about $2,300,000, and contain not less than 95,000,000 tons of ore. The Lake Superior leases alone are estimated at 50,000,000 tons, while the Adams lease is put down for far less than its owners would themselves estimate it. The holdings of this company are therefore put at 165,000,000 tons, and secured at a cost of less than $4,000,000. There is in addition the railroad property belonging to the consolidation, which cost what it was worth, except that the county of St. Louis gave it $250,000 under the belief that the Merritts had control. While all these properties are not operated by the Consolidated company, they are so tied up as to be obliged to ship over their road, and enter into the consideration of their holdings so far as tonnage is concerned.

While such a newspaper account can not be regarded as authoritative, it clearly indicates that the stock of the company originally was heavily watered. This is further indicated by the prices of the stock. Shortly after the company was organized its shares are reported to have sold at about $75 to $80, but in the depression of the middle nineties they sold as low as $9 a share and as late as 1898 they sold at $25 per share. The highest reported price in the boom of 1899 was about $60 per share; during 1900 it was quoted around $75 per share. Just prior to the organization of the Steel Corporation, the stock advanced very sharply, but this was obviously due to the very favorable terms upon which it was taken over by that concern, namely, 135 per cent in United States Steel preferred stock and 135 per cent in United States Steel common. However, sales of the stock were comparatively infrequent, and, furthermore, the company had never paid a dividend, so that the market price can not be regarded as a very safe indication of a fair valuation. At the same time, such information as is available concerning the organization of the company and the prices of its stock suggest that its capital at the start was heavily "watered."

The Lake Superior Consolidated Iron Mines, according to a listing statement submitted to the New York Stock Exchange by the Steel Corporation, had ore reserves in 1901 of from 300,000,000 tons to upward of 400,000,000 tons. It should be noted that much of this ore property was merely leased and not owned, so that to this extent the interest of the company was merely an equity in the ore.

One very valuable asset of the company was the Duluth, Missabe and Northern Railway, of which it owned the entire outstanding $2,512,500 capital stock. At the time of the transfer of the Lake Superior Consolidated Iron Mines to the Steel Corporation this road had outstanding $7,765,000 of bonds, of which $2,305,000 were owned by the Lake Superior Consolidated Iron Mines.

The road extends from Duluth into the Mesabi Range, and in 1901 had a main line of about 120 miles of track, with second tracks, sidings, etc., of about 100 miles. It is chiefly concerned in the transportation of iron ore. Like the Duluth and Iron Range Railroad (see p. 123) the Duluth, Missabe and Northern was able to operate at a very low cost. The average earnings of the road for the period 1897–1900, after deducting interest on bonded debt, were equivalent to about 21 per cent on the outstanding stock, while the earnings in 1900 alone were at the rate of nearly 58 per cent. There can be no doubt that this railroad was a very important consideration to the Steel Corporation in the purchase of the Lake Superior Consolidated Iron Mines, especially since with the Duluth and Iron Range Railroad it gave the Corporation a very effective control of ore transportation in the Mesabi region, not only with respect to its own production, but also to that of many of its competitors.

While, however, the railroad property was a valuable one, and while the Lake Superior Consolidated Iron Mines had very extensive ore reserves, as well as a considerable investment in mining improvements and equipment, the general evidence as to its organization and prices of its stock does not indicate a value for the company under competitive conditions at the time of its acquisition in excess of the par of its $29,424,594 stock outstanding. The subsequent value of the property, resulting from monopolistic control by the United States Steel Corporation of the Lake ore supply and the transportation thereof, is a very different matter. This question of merger value is referred to elsewhere. (See p. 326.)

The Bureau has, however, allowed in addition to the par value of the stock the surplus of the company on April 1, 1901. (See Table 12, p. 167.)

Section 14. Bessemer Steamship Company.

This was the leading ore vessel interest on the Great Lakes. It was a Rockefeller concern, and in this way was affiliated with the Lake Superior Consolidated Iron Mines, but the two corporations were distinct.

At the time of its acquisition by the United States Steel Corporation (May, 1901), the Bessemer Steamship Company owned 56 vessels, with a combined capacity of about 228,600 tons per trip. These were acquired on a cash basis by the Steel Corporation, the consideration being $8,500,000. As this price averages about $150,000 per vessel, or about $37 per ton of capacity, it seems probable that it was not greatly excessive, even though many of the vessels were old and comparatively small. (See pp. 194–197.)

Section 15. The Carnegie Company.

This company was incorporated under New Jersey laws in March, 1900, to merge under a single head all the various Carnegie properties, including the H. C. Frick Coke Company and its subsidiaries. It was capitalized as follows:

	Authorized and issued.
Bonds	$160,000,000
Stock	160,000,000

It is difficult to form a satisfactory estimate of the value of the properties of the Carnegie Company. There was no underwriting or promotion in the ordinary sense of the word, and the securities were not actively dealt in. In fact, no public sales of the stock were ever reported, except for a few scattered shares just about the time the company was acquired by the Steel Corporation. (See p. 171.) All of its securities were taken by the various individuals who had previously been indentified with the Carnegie and Frick concerns. It is impossible, therefore, to apply the same tests to this company that have been used in discussing the valuations of the other constituent concerns of the Steel Corporation.

It may, however, be noted that in the early part of 1899 W. H. Moore (the organizer of the American Tin Plate, National Steel, and several other steel companies), together with H. C. Frick and Henry Phipps, jr. (both partners of Mr. Carnegie), contemplated the purchase of the Carnegie and Frick properties and the transfer of these to a new corporation, and in accordance with this plan secured an option for the purchase of the old Carnegie Steel Company (Ltd.) on the basis of $250,000,000, and of the H. C. Frick Coke Company on the basis of $70,000,000, or a total of $320,000,000. It was reported that the prospective purchasers contemplated the organization of a company with no less than $675,000,000 capitalization. The deal fell through, however, the promoters paying Mr. Carnegie a cash forfeit of $1,170,000 for their option on his individual holdings in the Carnegie concern.

The failure of these negotiations, together with a disagreement over the terms of an alleged coke contract between the H. C. Frick Coke Company and the Carnegie Steel Company (Ltd.) resulted in very bitter feeling between Mr. Carnegie and Mr. Frick, which culminated in an attempt to eliminate the latter from the Carnegie concern, under an old partnership arrangement known as the "iron-clad agreement," which was designed to enable the controlling interest in the company to compel the resignation of any member whose connection was no longer desired. It was proposed to pay Mr. Frick for his interest in the Carnegie properties (which amounted to 6 per cent of the total) in cash. The book value of the old Carnegie company's properties on January 1, 1900, as officially determined at this time, was $75,610,104, this including about 30 per cent of the stock of the H. C. Frick Coke Company owned by the Carnegie Steel Company (Ltd.). On this basis, Mr. Frick's interest of 6 per cent was equivalent to $4,536,606.

Mr. Frick, however, was dissatisfied with this allotment and brought suit against Mr. Carnegie and his other partners to restrain them from carrying out their plans for eliminating him from the concern. Mr. Frick in his bill of complaint asserted that the book values of the various properties by no means represented their market values, as will be seen from the following excerpt from the bill:

> The books of said company do not now and have not recently contained a reasonable valuation of its assets. A very large quantity of its assets on the 1st day of January, 1900, stood upon its books at very inadequate valuations. Some of the assets did not there appear at any valuation. This was known to Carnegie and the other partners. The fair value of your orator's interest therein could not be determined from what now appears on the books of said company.

The answer of Mr. Carnegie and his associates to these contentions was, in part, as follows:

> These books show that the net value on the 31st day of December, 1899, of the assets of the Association was $75,610,104.96. To a large extent this book value represents the actual cost of the properties represented in the balance sheets of the Association. From time to time during the plaintiff's membership in the Association he, and other members, were appointed a committee to revalue certain assets. In every instance of such revaluation the plaintiff himself has been a member of such committee, and the values now entered and the properties included as having value may be taken as the plaintiff's own statement of their value to his fellow-members, on which, during the plaintiff's membership, more than fifteen settlements had been made with retiring members or the estates of deceased members.
>
> In the year 1892, and in anticipation of the dividend of profits which was then declared, the assets of the Association were carefully revalued and appraised by a committee consisting of H. C. Frick, H. M. Curry, and F. T. F. Lovejoy. Again, in the year 1899, at the suggestion of a committee consisting of H. C. Frick, Henry Phipps, jr., and F. T. F. Lovejoy, certain changes were made in the book value of the assets of the Association, and the result thus reached was a just, fair, and reasonable valuation of said assets, and was so accepted by the Association.
>
> Every month a balance sheet of the Association's assets and liabilities has been prepared, and a copy of the same furnished to the plaintiff, on which balance sheet the "book value" of the capital is clearly shown; and we aver that the valuation of the assets as shown on said books and balance sheets is a full, fair, and accurate valuation of the same, and that there has not been omitted from such books and balance sheets any asset which should properly find a place thereon.

* * * * * * *

> The method of valuing the interests of any member or members according to the valuation as stated on the books is eminently just and liberal. It is a method of ascertaining the value of partnership interests largely adopted both in this country and in England. The experience and judgment of business men justify us in saying (as we do) that such a method of valuation in large manufacturing companies, and especially of iron and steel in our country, as a rule, is more liberal to the seller than to the buyer; for experience has shown that partnership assets, on a just appraisement, seldom reach the value at which they stand on the books of the concern, and that a settlement made with a withdrawing partner, at a valuation of his interest based upon its value as appearing on the books of the firm, is, in a very large majority of cases, highly advantageous to such withdrawing partner.

Mr. Frick, in his bill of complaint, made the following statement:

> With the then outlook, Carnegie estimated in November, 1899, that it [the company] will realize from its business for the year 1900 a profit of $40,000,000, and I then and now believe that said profit will exceed $40,000,000. During the year ending December 31, its net profits were $21,000,000.
>
> Its assets on the 31st day of December, 1899, were clearly worth more than $250,000,000. Within the last few months Carnegie has asserted the fair value thereof to be greatly in excess of that sum. He has further asserted that they are of such value that in ordinary times of peace and reasonable business prosperity in England, the same could be readily placed in the London market on the basis £100,000,000. Since the making of these assertions the value of these assets has largely increased.
>
> Within the year 1899 huge additions to and improvements of the works have been completed, thereby adding enormously to their producing power. Other additions and improvements, now in course of construction, which will still further greatly increase said producing power and future profits, will soon be completed.

Mr. Carnegie's answer on the matter of the value of the property was a flat denial, as follows:

> *It is not true that on December 31, 1899, the said Association had assets or property, either real or personal or tangible, in any form, which the said Association in its legal capacity could transfer, which were worth $250,000,000; nor did the defendant, Andrew Carnegie, ever assert that said assets were in excess of that sum.*[1] The said Andrew Carnegie has repeatedly expressed the opinion with reference to the earning capacity of said company that the personnel of its organization was worth more than all the property of the company. It is true that the said Andrew Carnegie has expressed and still holds sanguine views as to the future of said company, but any such views are based upon the maintenance of the organization of the said company in its present condition of efficiency and harmony.

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[1] Italics by Bureau.

Statements thus submitted in litigation obviously must be used with discretion, but the positive and direct assertion of Mr. Carnegie that the Carnegie Steel Company (Ltd.) did not have assets or property in any form which it could legally transfer to the value of $250,000,000 is entitled to some weight. On the other hand, under the "ironclad agreement," above referred to, there may have been an inducement to keep the book values unduly low, so that this can not be accepted as necessarily a true indication of the property values; in fact, it is certain that some of the book values of investments were less than the true value. The intangible assets of the Carnegie concern, such as its organization and great earning power, were also important.

The valuation of such intangible considerations in the case of a successful company whose securities were not on the market is an extremely difficult matter. It is reasonably certain, however, that the value of the tangible property of the Carnegie Steel Company (Ltd.) and of the H. C. Frick Coke Company, taken together, was very much below the $320,000,000 of stock and bonds issued by the new Carnegie Company of New Jersey when it acquired these concerns.

ANALYSIS OF BALANCE SHEET OF CARNEGIE STEEL COMPANY (LTD.) ON MARCH 1, 1900.—Following is a copy of the balance sheet of the Carnegie Steel Company (Ltd.) on March 1, 1900, or just before the organization of the Carnegie Company of New Jersey was perfected, as given in J. Howard Bridge's "Inside History of the Carnegie Steel Company":

TABLE 10.—BALANCE SHEET OF THE CARNEGIE STEEL COMPANY (LTD.) ON MARCH 1, 1900.[1]

Assets.

Cash:		
Treasury	$1, 287, 437. 66	
Works	19, 283. 43	
Sales agencies	25, 302. 50	
		$1, 332, 023. 59
Bills receivable		7, 174, 804. 02
Mortgages receivable, employees		239, 845. 44
Accounts receivable:		
Current	16, 381, 884. 06	
Securities	517, 324. 80	
		16, 899, 208. 86
Stocks:		
Finished product	2, 755, 203. 92	
Materials for use	7, 087, 964. 76	
Ore at Lake ports	1, 952, 212. 31	
Ore at mines	16, 470. 00	
		11, 811, 850. 99
Available assets		37, 457, 732. 90

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[1] J. H. Bridge, "Inside History of the Carnegie Steel Company," page 313.

Works and properties:			
Edgar Thomson Works	$10,429,594.67		
Duquesne Steel Works	2,333,406.35		
Duquesne Furnaces	5,626,211.91		
Homestead Steel Works	16,644,201.84		
Carrie Furnaces	1,079,588.69		
Howard Axle Works	717,476.87		
Lucy Furnaces	1,251,869.99		
Keystone Bridge Works	718,160.11		
Upper Union Mills	1,000,000.00		
Lower Union Mills	700,000.00		
Larimer Coke Works	200,000.00		
Youghiogheny Coke Works	160,000.00		
City farm lots	960,664.50		
Verona land	40,000.00		
Liberty farm	225,000.00		
Oliver land	310,313.81		
Fawcett land	25.00	$42,396,513.74	
1900 improvements:			
Edgar Thomson Furnaces	50,489.13		
Edgar Thomson Steel Works	31,441.69		
Edgar Thomson Foundry	10.50		
Duquesne Furnaces	13,324.48		
Duquesne Steel Works	304,635.24		
Homestead Steel Works	240,666.98		
Carrie Furnaces	204,070.56		
Howard Axle Works	102,542.90		
Lucy Furnaces	3,415.57		
Keystone Bridge Works	1,663.18		
Upper Union Mills	6,537.12		
Lower Union Mills		958,797.35	
Stocks and bonds, investments		14,940,405.50	$58,295,716.59
Undivided capital		77,710.72	
Due from partners		5,585,642.22	5,663,352.94
Total assets			101,416,802.43

Liabilities.

Mortgages payable:		
Edgar Thomson Works	$209,945.00	
Duquesne Steel Works	995,000.00	
Duquesne Furnaces	200,000.00	
Homestead Steel Works	103,250.00	
Carrie Furnaces	600,000.00	
Howard Axle Works	273,275.85	
Keystone Bridge Works	50,000.00	
Liberty farm	150,000.00	
Oliver land	153,000.00	$2,734,470.85
Bills payable:		
Current	4,360,174.73	
Stewart	375,000.00	
Berntraeger	271,423.56	5,006,598.29
Accounts payable:		
Current	2,469,650.44	
Ore	240,130.21	2,709,780.65
Special deposits		3,776,276.27
Liabilities payable		14,227,126.06

Special funds:			
Contingent fund	$557, 143. 50		
Contingent, special	711, 810. 00		
Relining fund	211, 328. 85		
Coal extinguishment fund	15, 822. 45		
		$1, 496, 104. 80	
Due to partners		4, 113, 657. 38	
Surplus	56, 579, 914. 19		
Capital	25, 000, 000. 00		
		81, 579, 914. 19	
			$101, 416, 802. 43

It is possible in a general way to analyze some of the principal items in this balance sheet.

Current assets.—Including the amounts due from partners and the "undivided capital," these current assets aggregated $43,121,086. Against this total, however, should be placed the current liabilities (including the amounts due to partners), aggregating $15,606,313, thus leaving the net working assets at $27,514,773.[1]

Manufacturing plants.—The manufacturing plants—that is, "works and properties"—it will be seen, were entered on the balance sheet at $42,396,513.74, or, including improvements up to the 1st of March, 1900, of $958,797.35, at a total valuation of $43,355,311.09. This item represents chiefly blast furnaces, steel works, and other manufacturing plants, with the plant sites, and also includes some miscellaneous land and some coke property.

This book valuation of the manufacturing properties may be accepted as a fair current valuation at the time. These properties, as already shown, had been revalued on various occasions by the Carnegie interests. It is true that the plant sites, as claimed elsewhere (see note, p. 158), may have appreciated considerably, and that possibly the full amount of this appreciation was not shown. A very rough comparison of capacities and valuations for the Carnegie, Federal Steel, and National Steel companies, however, indicates that the book valuation of the manufacturing properties of the former must have been reasonably near a fair current valuation.

Investments.—The only other significant item of assets, as entered on the balance sheet, is that of investments, which, it will be seen, amounted to $14,940,405.50. This item is the most difficult of any to criticize intelligently. It included the holdings of the Carnegie Steel Company (Ltd.) in the H. C. Frick Coke Company, the Oliver Iron Mining Company, the Pittsburg Steamship Company, the Carnegie Natural Gas Company, the Union Railroad Company, the Pittsburg, Bessemer and Lake Erie Railroad Company, and some minor investments.

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[1] It is possible that some of the items under "Special funds" in the preceding balance sheet should be deducted from the gross current assets, but since the exact nature of these is not known this has not been done, but instead a deduction for all these funds and the mortgages is later made. (See p. 159.)

The Carnegie Steel Company (Ltd.) held a 29.552 per cent interest in the stock of the H. C. Frick Coke Company, the par value of which amounted to $2,955,200, but which was carried on the books of the Carnegie Steel Company (Ltd.) at $5,110,042; this, as shown elsewhere (see note, p. 158), was the book value, representing the actual cost plus its proportion of undivided surplus. On the basis of such a valuation for a 29.552 per cent interest, the entire book value of the H. C. Frick Coke Company's stock would have been $17,291,696.

There can be no doubt, however, that the real value of this H. C. Frick Coke property was greatly in excess of the book value. The company, in March, 1900, had approximately 40,000 acres of coking-coal land, the value of which at the time probably ranged anywhere from $750 to $1,000 per acre. It also had 11,000 coke ovens, which may be reckoned as worth from $6,000,000 to $7,500,000. The company also owned several subsidiary concerns, chiefly water or transportation companies. The aggregate value of these miscellaneous investments, however, could not have been very great. Without attempting any detailed valuation of the Frick Coke properties, it is probably safe to say that at a conservative valuation they were worth in March, 1900, from $40,000,000 to $50,000,000. James J. Campbell, the former auditor and secretary of the Carnegie Company, in an affidavit submitted in litigation against the Steel Corporation in 1902 (see p. 158), stated that the 30 per cent interest of the Carnegie Steel Company (Ltd.) in the H. C. Frick Coke Company was "considered to be worth more than $20,000,000" in March, 1900. On this basis the entire value of the Frick concern would have been at least $66,667,000. However, Mr. Campbell's estimate, since it was submitted in defense of the Steel Corporation's capitalization, was likely to exaggerate a fair market valuation, and it seems that an estimate of $50,000,000 for the Frick property would be much nearer the mark and probably high.

Another important investment was that in the Oliver Iron Mining Company, of which the Carnegie Steel Company (Ltd.) held $1,000,000 capital stock, out of a total of $1,200,000. This stock, according to the affidavit by James J. Campbell, above referred to, was carried on the books of the Carnegie concern at $2,167,000, this sum representing the original investment plus accumulations of profit, but after allowing for outstanding indebtedness. This sum undoubtedly was less than a fair valuation of the Carnegie company's interest in the Oliver Iron Mining Company. While the valuation of the ore property of the Steel Corporation can best be considered as a whole instead of by parcels, it may be noted here in passing that the remaining one-sixth interest in the Oliver Iron Mining Company which had been held by the Oliver & Snyder Steel Company was valued in 1897 by the owners, in an option submitted to the promoters of a $75,000,000 wire consolidation then in contemplation, at $1,400,000. If that was a fair price for that fraction, it would indicate a value for the entire property, at that time, of $8,400,000, on which basis the five-sixths interest held by the Carnegie Steel Company (Ltd.) would have been worth $7,000,000. In view of the fact that this option was submitted to promoters who were organizing a consolidation, it is fair to assume that the vendors named a price which they considered liberal. On the other hand, the value of ore property in 1897 would not be a fair criterion of the value of the same property in 1900. Moreover, during this interval the Oliver Iron Mining Company had added materially to its holdings of ore, so that for this reason also the price named on this one-sixth interest in 1897 can not be regarded as conclusive.

It may further be noted that this one-sixth interest in the Oliver Iron Mining Company, together with a one-sixth interest in the Pittsburg Steamship Company, was sold in 1901 for $9,250,000 of United States Steel preferred stock and a like amount of United States Steel common stock. As shown elsewhere (p. 196), the cash value of the one-sixth interest in the Pittsburg Steamship Company in April, 1901, may be estimated as worth about $625,000, the book investment in the fleet on that date being $3,783,000. Assuming that the United States Steel common stock issued in this transaction was a mere bonus, and that the $9,250,000 of preferred stock represented the full cash value of the ore property and the steamship property combined, this would indicate a cash price of $8,625,000 for the one-sixth interest in the ore property alone. On the basis of such a valuation the five-sixths interests held by the Carnegie Steel Company (Ltd.) would have been worth $43,125,000, and the entire property $51,750,000. Such a valuation, however, is certainly excessive. The United States Steel Corporation was anxious to get control of this ore company, and the price which it was willing to pay for a small fraction of the stock under these conditions might be an even more unsafe criterion than the option price on this same one-sixth interest given four years earlier.

In view of the difficulties of estimating the ore property by parcels, the Bureau, as already stated, has undertaken a valuation of the ore property of the Steel Corporation as a whole. This is done in Chapter III. No attempt is made to place a definite valuation upon the ore property of the Carnegie company by itself.

The Union Railroad Company, which was carried on the books of the old Carnegie company at $2,290,000, was probably worth considerably more than that sum (see p. 193), and the book valuation assigned the Carnegie Natural Gas Company, namely, $1,500,000, was probably low.[1]

The valuations at which the other investments of the Carnegie Steel Company (Ltd.) were carried on its books are not known. The most important of these were 110,010 shares (par value $5,500,500) of the common stock and 10,000 shares (par value $500,000) of the preferred stock of the Pittsburg, Bessemer and Lake Erie Railroad Company, a five-sixth interest in the Pittsburg Steamship Company, the entire stock of the Pittsburg and Conneaut Dock Company, and a one-half interest in the Pewabic company, owning the Pewabic mine. There can be no doubt that a fair valuation of the stock of the Pittsburg, Bessemer and Lake Erie Railroad Company in March, 1900, would be considerably less than the par value of the shares. Even allowing the full par value, however, the Carnegie company's investment in that stock would have been worth only about $6,000,000.

The Pittsburg Steamship Company in March, 1900, had 6 steamers and 1 barge, some of which were old and of small capacity. It had under construction, however, 5 new and large steamers. The book investment in these vessels on March 1, 1900, was $2,385,947. On this basis, the five-sixths interest of the Carnegie Steel Company (Ltd.) would be worth, roughly, $2,000,000.

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[1] Excerpts from Mr. Campbell's affidavit (submitted in July, 1902), referred to on page 156, concerning these properties, follow:

> For example the Carnegie Steel Company (Ltd.) then [early in 1900] owned $1,000,000 par value out of the total par value of $1,200,000 of the Oliver Iron Mining Company, which was entered on the books of the Carnegie Steel Company (Ltd.) at $2,167,000 corresponding to the net book value of the properties as they appeared on the books of the Oliver Iron Mining Company itself. The book value of these ore properties represented the cost of acquiring the same and accumulations of profit. The Oliver Iron Mining Company owned Bessemer and other iron-ore properties of enormous value, which had been acquired at a very low cost and before the great value of the Lake Superior Bessemer ores was known. Some of these ore properties, which were acquired at a nominal cost, are now worth one hundred fold such cost.
>
> * * * * * * *
>
> The 30 per cent interest in the H. C. Frick Coke Company was carried on the books of the Carnegie Steel Company (Ltd.) at $5,110,042, which was based not on the actual value of the properties themselves but on the book value, which represented cost and undivided surplus, but most of such properties were purchased many years before at a small or nominal price per acre, and prior to the discovery of the great value of the Connellsville coal for coking purposes. The 30 per cent interest of the Carnegie Steel Company (Ltd.) in the H. C. Frick Coke Company was considered to be worth more than $20,000,000 at the time it was acquired by the Carnegie Company of New Jersey, in March, 1900, and could not then, in my opinion, at the market value of the same coal fields, have been replaced or duplicated at any such figure. The stock of the Carnegie Natural Gas Company, which was carried on the books of the Carnegie Steel Company (Ltd.) at $1,500,000, was then and is now worth many times that amount. The stock of the Union Railroad Company, which was carried on the books at $2,290,000, was worth in my opinion at least $10,000,000.
>
> * * * * * * *
>
> The mills and plants, such as the Edgar Thomson Works, the Homestead Steel Works, the Duquesne Steel Works, the Duquesne Furnaces, and other works, were all entered at their original cost and included nothing for large amounts expended on the same to improve and modernize them, which expenditures were made out of current earnings of the company and were charged off against its profit and loss account, but which materially increased not only the intrinsic values of the plants by many million dollars, but their earning capacity. [See, however, the additions to such properties in the balance sheet on page 154.] Moreover, the valuations contained in the books comprehended large tracts of real estate at the actual cost thereof, some of which had been acquired twenty-five or thirty years prior thereto at a small figure and had appreciated enormously in value. These properties are exceptionally situated by reason of their proximity to coke fields, to manufacturing and distributing centers, and to economical facilities for railroad and river navigation.

As shown later, the Steel Corporation was at this time endeavoring to justify its huge capitalization so that there was a great temptation before its officers to make their estimates of its property liberal.

The investment in the Pittsburg and Conneaut Dock Company was approximately $1,200,000.

On the foregoing basis the indicated value of the Carnegie and Frick properties, other than their ore and natural-gas property, would be approximately as follows:

Assets other than "investments" (book value):	
Working capital	$27,500,000
Manufacturing properties	43,350,000
Union Railroad Company (see text)	2,290,000
Pittsburg Steamship Company (five-sixths interest)	2,000,000
Pittsburg and Conneaut Dock Company	1,200,000
"Investments" exclusive of ore and natural-gas property (estimated value):	
H. C. Frick Coke Company (entire property)	50,000,000
Pittsburg, Bessemer and Lake Erie Railroad (52 per cent interest)	6,000,000

The total of these various items is $132,340,000, but after deducting the mortgages of $2,734,471 and the special funds of $1,496,105 shown in the balance sheet on pages 154–155, the net total would be approximately $128,100,000.[1]

All of the above valuations are probably sufficiently liberal, with the exception of that for the Union Railroad Company, the actual value of which stock probably considerably exceeded its book value. Allowing as much as $4,000,000 additional to cover this item, there would be left, roughly, $28,000,000 of bonds and all of the $160,000,000 stock of the Carnegie Company to cover its ore and natural-gas property and a few unimportant remaining items, and intangible considerations. The valuations of the ore and natural-gas properties are taken up in the next chapter.

The Carnegie ore properties were almost entirely leaseholds, which have, of course, as a rule, a lower value than fee property. The ore tonnage on these properties was very much less than that of the Lake Superior Consolidated Iron Mines.

These figures, while arbitrary in many respects, certainly suggest that the tangible property of the Carnegie Company of New Jersey was not much, if at all, in excess of the $160,000,000 bond issue, and that the $160,000,000 stock was issued for earning power and other intangible considerations.

It may be noted that in the agreement providing for the organization of the New Jersey company it was stated that the various

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[1] As shown on page 80, there was a considerable amount of underlying indebtedness, largely of railroad concerns. This need not be considered here, however, as the valuations placed on the stocks of such roads allow for such indebtedness.

Carnegie Steel properties would receive $125,000,000 in bonds of the new concern and a like amount in its stock,[1] and the H. C. Frick Coke properties $35,000,000 in bonds and $35,000,000 in stock. This arrangement, in view of the usual method at that time of giving common stock as a bonus with preferred issues, certainly gives some color to the suggestion that the bonds may have been regarded as similar to preferred stock and intended to cover the physical property and that the stock was issued to cover earning power and other intangible considerations.

There can be no question that the earning power of the properties, as distinguished from the value of the tangible assets, figured very largely in the capitalization of the New Jersey concern. As shown above (p. 152), the answer of Mr. Carnegie and his associates in the H. C. Frick suit stated that Mr. Carnegie had repeatedly expressed the opinion that the personnel of the organization was worth more than all of its property. In this connection the following further excerpt from the answer may be cited:

> The profits which have resulted do not represent simply earnings or interest on the capital invested, but have been the product from year to year of the brains, intelligence, and industry of the several members who, in their separate departments, have so conducted the business of the association as to produce this profit. Any capitalization of the earning power of the enterprise as a going concern would in no wise represent only the value of the plant and other property which are the assets of the Association, and to which alone upon his withdrawal, retirement, or exclusion from the Association the plaintiff is entitled to an account. Such capitalization would be based upon the continued operation of the plant by the members, upon whose future earning power the plaintiff has no lien or claim.

EARNINGS OF THE CARNEGIE PROPERTIES IN 1899.—The earnings of the principal Carnegie properties for the years 1896–1900, as given by J. H. Bridge, in his book upon the "Inside History of the Carnegie Steel Company," were as follows:

TABLE 11.—NET PROFITS OF CARNEGIE STEEL COMPANY (LTD.), 1896–1900.[2]

Year.	Net profits.[3]	Year.	Net profits.[3]
1896	$6,000,000	1899	$21,000,000
1897	7,000,000	1900	40,000,000
1898	11,500,000		

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[1] This may have covered the Carnegie Steel Company's interest in the H. C. Frick Coke Company.

[2] Bridge, "The Inside History of the Carnegie Steel Company," page 295.

[3] Mr. Bridge in his book referred to $4,500,000 as additional profits reinvested, but it was not clear whether this applied to the year 1900 or to a longer period.

The earnings of the company for 1899, it will be seen, were \$21,000,000, this amount including \$1,253,853 (or 29.552 per cent) of the earnings of the H. C. Frick Coke Company. The total profit of the Frick concern, therefore, was \$4,242,870. Including these total earnings, the entire profit of both the Carnegie and Frick concerns for the year was \$23,989,017. This would be equivalent to only 7.5 per cent on a capitalization of \$320,000,000. To capitalize a great iron and steel concern on a basis of 7.5 per cent would be suggestive of overvaluation in any instance. When it is considered that the year 1899 was one of exceptional prosperity in the iron and steel industry, such overvaluation is the more apparent. It is true that in 1900 the earnings of the Carnegie and Frick properties combined were nearly \$40,000,000, or at the rate of about 12½ per cent on a total capitalization of \$320,000,000. The year 1900, however, while not quite so remarkable with respect to the high prices of products as 1899, was a phenomenally prosperous year for the Carnegie Company, and the earnings afford no satisfactory basis for judging the value of the property.

The earnings of some of the other large iron and steel companies for the year 1899, and the ratio of those earnings to capitalization, were as follows:

Company.	Issued securities, Dec. 31, 1899. [1]	Earnings 1899 before deducting bond interest. [2]	Per cent.
Federal Steel	\$126,345,000	\$9,371,136	7.4
National Steel	62,000,000	8,930,000	14.4
American Steel and Wire	90,000,000	12,162,530	13.5
National Tube	80,000,000	13,878,365	17.3

[1] Including underlying bonds but not other indebtedness.

[2] In two cases the earnings are not for the exact calendar year; thus the fiscal year of the National Steel Company ended February 28, 1900, and that of the National Tube Company ended June 30, 1900.

From this table it appears that the earnings of the Federal Steel Company in 1899, before deducting bond interest, were equivalent to 7.4 per cent on its total outstanding capitalization (stock and bonds). This was substantially the same rate as that indicated by comparing the earnings of the Carnegie and Frick concerns, in the same year, with the subsequent capitalization of \$320,000,000. Moreover, the earnings of the other three companies—National Steel Company, American Steel and Wire Company, and the National Tube Company—show a higher rate on their total capitalization than do even the enormous earnings of the Carnegie Company for the year 1900. In view of the preceding evidence that the capitalization of these three concerns was very greatly in excess of their actual investment, the fact that they still showed higher rates of earnings than the Carnegie Company in its exceptionally prosperous year may be fairly presented as confirming other evidence that the capitalization of the Carnegie Company was excessive.

Further evidence tending to the same conclusion is shown in the following table, which gives the capacity of finished products of the Carnegie, the Federal Steel, and the National Steel companies, and the amount of securities per ton of capacity in 1900:

Company.	Issued securities, Dec. 31, 1900.	Capacity of finished steel products.	Securities per ton capacity.
		Tons.	
Carnegie	[1] $336,600,000	3,200,000	$105
Federal Steel	126,345,000	2,300,000	55
National Steel	62,000,000	2,000,000	31

[1] Including underlying bonds of approximately $16,000,000; in this comparison purchase-money obligations are not included.

It should be noted that these figures of capitalization and capacity, as well as those of earnings given in the preceding table, are not strictly comparable for the reason that the Carnegie Company had a larger investment, relatively as well as absolutely, in coal and miscellaneous properties than most of the other concerns. However, the Federal Steel Company had very extensive ore property and also very important railroad properties, while its holdings of coal and coke were important. It has already been shown that the capitalization of that concern was very greatly in excess of the value of its investment in tangible property at its organization; and allowing for additions through surplus earnings up to the close of 1900 there can be no doubt that there was still a considerable excess of securities over the investment in tangible property. Including such overcapitalization, however, the average per ton of capacity for the Federal Steel Company was only $55, whereas the average for the Carnegie Company was, in round numbers, $105 per ton. The average for the National Steel Company, it will be seen, was only $31 per ton, but this is not so fairly comparable as that of the Federal Steel Company. However, the fact that these two heavily capitalized concerns show average capitalizations per ton of capacity very much below the per ton average for the Carnegie Company tends to confirm other evidence of extensive overcapitalization by the latter concern.

EXCESSIVE PRICE PAID FOR CARNEGIE COMPANY BY STEEL CORPORATION.—For $159,450,000 of bonds and $160,000,000 of stock of the

Carnegie Company, the United States Steel Corporation issued $492,000,000 of its securities, as follows:

For $159,450,000 of Carnegie Company bonds	bonds	$159, 450, 000
For $96,000,000 of Carnegie Company stock	do	144, 000, 000
For $64,000,000 of Carnegie Company stock	preferred stock	98, 277, 120
	common stock	90, 279, 040
Total		[1] 492, 006, 160

There can be no possible doubt that this enormous issue of securities by the Steel Corporation to acquire the securities of the Carnegie Company meant heavy overvaluation. Of course, the United States Steel Corporation, in buying the Carnegie Company, paid not only for tangible assets, but also—and very liberally—for earning power, and, perhaps more important still, for the elimination of Mr. Carnegie. However, even on the basis of earning power, the price paid for the Carnegie Company's securities was excessive. As just shown, the earnings of the Carnegie Company in the year 1900 were about $40,000,000. This compares with combined earnings of all the Carnegie and Frick concerns in 1899 of about $24,000,000, which in turn were greatly in excess of the earnings of any previous year. Earnings of even $40,000,000, however, represent only a little over 8 per cent on the total amount of securities issued ($492,006,160) by the Steel Corporation for the Carnegie concern. The average earnings of the Carnegie and Frick properties in 1899 and 1900 were about $32,000,000. This average amount would be equivalent to 6½ per cent on the total amount of securities issued for the company. The year 1899, as just stated, was a phenomenally prosperous one in the steel industry, and 1900, despite some reaction, was by far the most prosperous year ever enjoyed by the Carnegie concern up to that time. To capitalize a steel business on the earnings of two abnormally prosperous years on a 6 or even an 8 per cent basis obviously means heavy overvaluation judged by any reasonable standard.

That the purchase price of the Carnegie Company involved a heavy overissue of Steel Corporation securities is evident from a comparison of this price with prices paid for stocks of the Federal Steel Company and the National Steel Company, which companies, it will be remembered, were in the same general class as the Carnegie Company, since they were well integrated and since they were chiefly concerned with the manufacture of the cruder and heavier classes of steel products. The amounts of United States Steel securities, par value, issued in the acquisition of the securities of these three companies were as follows:

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[1] Apparently $1,200,000 cash was also paid for the Carnegie concern. This, however, has been treated as a part of the expenses of the underwriting syndicate. (See note, p. 174.)

	Total U. S. Steel securities issued in acquisition.
Carnegie Company	[1] $492,006,160
Federal Steel Company	110,415,546
National Steel Company	73,702,500

In other words, the Steel Corporation issued about 4½ times as much in its securities, at par value, for the Carnegie Company as it did for the Federal Steel Company, and nearly 7 times as much as it did for the National Steel Company. This, however, does not fairly state the case, because, as just shown, more than one-half the purchase price of the Carnegie Company was in bonds, which were worth much more than Steel Corporation stocks, whereas no bonds were issued for the stocks of the Federal Steel and National Steel companies. Based upon the market values of the securities issued, the price for the Carnegie Company was about 6 times as great as that for the Federal Steel Company and about 9 times as great as that for the National Steel Company.

It should be pointed out that the property of the Carnegie Company was acquired subject to underlying indebtedness, approximating $24,850,000 (including purchase-money obligations, etc.), and that the stock of the Federal Steel Company was preceded by nearly $27,150,000 of underlying indebtedness, and that of the National Steel Company by about $6,000,000. It will be seen, therefore, that the property of the Federal Steel Company was subject to a greater underlying indebtedness, both relatively and actually, than was that of the Carnegie concern.

However, it is incredible that the Carnegie Company was worth to the Steel Corporation 6 times as much or even 4½ times as much as the Federal Steel Company (even after allowing for the underlying debt in each case), except on the sole ground that the Corporation thus acquired what would have been its most dangerous competitor. In other words, this price was the price of peace. The capacity of the steel works, blast furnaces, etc., of the Carnegie Company was only about 40 to 50 per cent greater than that of the Federal Steel Company. It is true that the Carnegie Company had very much larger holdings of coal and coke property and possibly as large holdings of iron-ore lands as the Federal Steel Company. Even at high valuations for these coke and ore properties, however, it would be absurd to argue that the Carnegie Company was worth 6 times or even 4½ times as much as the Federal Steel Company. The United States Steel Corporation, of course, in making these acquisitions considered earning power and other intangible considerations, and on this basis might have been justified in paying a much greater price for the Carnegie Company than for the Federal Steel Company relative to the tangible assets. As just shown, however, the earnings of the Carnegie Company, great as they were, were far from sufficient to justify any such huge price as was actually paid for that concern.

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[1] Of this total $303,450,000 was in United States Steel bonds. (See note 2, p. 174.)

In the case of the National Steel Company the capacity of the steel works, blast furnaces, etc., was only about two-thirds that of the Carnegie Company, while the National Steel Company's investment in ore and coke properties was relatively unimportant as compared with the very valuable properties of this sort owned by the Carnegie Company. Nevertheless, it is incredible that the Carnegie Company was worth 9 or even 7 times as much as the National Steel Company (again taking underlying indebtedness into account).

It should be kept in mind also that the Steel Corporation issued its securities for the stocks of the Federal Steel and National Steel companies themselves on a very liberal basis. Thus, the Steel Corporation issued more than $110,000,000 of its stocks for the stocks of the Federal Steel Company, whereas the equity represented by the latter at the organization of the Federal Steel Company in 1898, as already shown, did not exceed $63,000,000. Allowing for the surplus earnings accumulated by the company up to April 1, 1901 (roughly, $18,150,000), and also allowing for intangible considerations, the price paid by the United States Steel Corporation in its securities must be regarded as high.

In the same way, in the case of the National Steel Company, the value of its stock undoubtedly was very much less than the par value of the United States Steel stocks issued therefor, namely, $73,702,500. The foregoing comparison of the relative amounts of securities issued for the three companies, therefore, by no means tends to show the full extent of the overvaluation of the Carnegie property, but simply shows that, judged by even this imperfect standard, the amount of that overvaluation must have been very great.

The conclusion is inevitable, therefore, that the price paid for the Carnegie Company was largely determined by fear on the part of the organizers of the Steel Corporation of the competition of that concern. Mr. Carnegie's name in the steel industry had long been synonymous with aggressive competition, and there can be little doubt that the huge price paid for the Carnegie concern was, in considerable measure, for the specific purpose of eliminating a troublesome competitor, and Mr. Carnegie personally in particular. This, it may be noted, was the interpretation generally placed upon the transaction in trade and financial circles at the time.

Section 16. Summary of evidence as to value of property of constituent concerns of the United States Steel Corporation.

From the discussion of the organization of the principal constituent companies of the United States Steel Corporation given in this chapter, it is apparent that most, if not all, of these concerns issued securities greatly in excess of the value of the tangible properties which they acquired at the dates of their respective organizations. In the case of those companies having both preferred and common stock, the evidence in general indicates that the preferred stock alone covered practically all the tangible property, and that the common stock represented nothing but earning power and other intangible considerations and mere "water." Moreover, in some cases, especially that of the American Sheet Steel Company, there is ground for the view that even the preferred stock was not fully protected by tangible property values. In the case of the Federal Steel Company, on the other hand, the available evidence indicates that the common stock was partly covered by physical property, although a large proportion of the common stock issue of this concern appears to have been issued against earning power, or as a mere bonus. In the case of the Lake Superior Consolidated Iron Mines, which had no preferred stock, there originally appeared to have been a heavy overissue of common stock and the book valuation of the property in 1901 seems to have been high. The Carnegie Company presents a more difficult problem, but here there is at least a fair presumption that the physical property did not exceed the $160,000,000 of bonded indebtedness. The intangible considerations in the case of this concern, however, were unusually important, although, even including these, the evidence presented indicates that the total capitalization of $320,000,000 involved very great overvaluation.

It is obviously impossible to present any statement of the property values of these constituent concerns by this method which can be regarded as exact or conclusive. A rough summary may, however, be made on the basis of the valuations tentatively arrived at in the preceding section. This is done in Table 12.

TABLE 12.—ESTIMATED VALUE OF TANGIBLE ASSETS OF STEEL CORPORATION ON APRIL 1, 1901, BY CONSTITUENT COMPANIES.

Constituent concern.	Date of organization.	Estimated values of tangible assets (over underlying indebtedness) at date of organization.	Surplus, Apr. 1, 1901.	Total tangible assets (over underlying indebtedness) Apr. 1, 1901.	Underlying bonds, purchase-money obligations, etc.	Total value of tangible property on Apr. 1, 1901.
Carnegie Company (New Jersey)	1900	$160,000,000	$37,563,000	$197,563,000	$25,392,000	$222,955,000
Federal Steel Company	1898	63,000,000	18,147,000	81,147,000	27,139,000	108,286,000
American Steel and Wire Company (New Jersey)	1899	40,000,000	13,162,000	53,162,000	6,055,000	59,217,000
National Tube Company	1899	40,000,000	27,485,000	67,485,000		67,485,000
National Steel Company	1899	27,000,000	6,909,000	33,909,000	5,989,000	39,898,000
American Tin Plate Company	1898	18,325,000	6,178,000	24,503,000	190,000	24,693,000
American Steel Hoop Company	1899	14,000,000	1,661,000	15,661,000		15,661,000
American Sheet Steel Company	1900	17,000,000	706,000	17,706,000	2,000,000	19,706,000
American Bridge Company	1900	[1] 31,374,000	4,030,000	35,404,000	157,000	35,561,000
Lake Superior Consolidated Iron Mines		[1] 29,400,000	2,095,000	31,495,000	5,542,000	37,037,000
Shelby Steel Tube Company		[1] 3,000,000	[3] *209,000*	2,791,000		2,791,000
Bessemer Steamship Company					8,500,000	8,500,000
One-sixth interest in Pittsburg Steamship Company and Oliver Iron Mining Company		[2] 9,250,000		9,250,000		9,250,000
Total		452,349,000	[4] 117,727,000	570,076,000	[5] 80,964,000	651,040,000
Cash capital provided at organization of Steel Corporation						25,003,000
Approximate grand total of value of tangible property on Apr. 1, 1901						676,043,000

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[1] Estimated value of property at time of its acquisition by the United States Steel Corporation (except surplus) instead of at its organization, but shown in this column for convenience in statement.

[2] Amount of preferred stock of United States Steel Corporation issued therefor; this probably excessive, but allowed here in absence of other data.

[3] Deficit.

[4] The surplus here given is the total surplus on March 31, 1901 (after certain adjustments made by the Steel Corporation). It is assumed that all of this surplus was accumulated by the constituent concerns subsequent to the dates of their respective organizations, since in most, if not in all, cases they commenced business without any surplus. The American Bridge Company, the Lake Superior Consolidated Iron Mines, the Bessemer Steamship Company, the Shelby Steel Tube Company, and the one-sixth interest in the Oliver Iron Mining Company and the Pittsburg Steamship Company were acquired subsequent to April 1, 1901.

[5] About $60,000,000 of this total was outstanding at the time the various companies were organized.

From this table, therefore, it appears that the value of the tangible property of these constituent concerns (at the dates of their respective organizations, except in certain cases, as noted) was $452,349,000, this being the amount over and above underlying indebtedness of approximately $60,000,000, thus making a grand total at that time of $512,349,000. This may fairly be considered as the total investment of these concerns at these respective dates. Adding to this their surplus earnings of $117,727,000 accumulated during the period up to April 1, 1901, and again including the underlying indebtedness (which had increased to $80,964,000), as representing an equivalent investment, gives the total investment of these concerns in tangible property on April 1, 1901, of $651,040,000. Adding to this the $25,003,000 new cash capital provided, gives a final total of tangible assets for the Steel Corporation on April 1, 1901, of $676,043,000.

Aside from additions to the investment of these concerns through the accumulated surplus earnings, it is possible that their properties, even after allowing for depreciation, were worth somewhat more in 1901 than they were when those constituent companies were organized. In the case of manufacturing plants, the cost of construction in this interval undoubtedly had increased somewhat. However, it is known that some of these concerns did not write off sufficient amounts for depreciation of their plants. Furthermore, it would be very unsafe to regard such appreciation in plant valuations, as distinct from additions through expenditure of new capital, as of a permanent character, since so far as it existed at all it was undoubtedly a reflection of the unusual prosperity which prevailed in the steel industry during a considerable portion of this period. Still again, any such appreciation in current valuations of physical properties was probably due, in part, to the concentration of control of the industry into the hands of comparatively few concerns, with the consequent restriction of competition. This is especially true in the case of the natural resources. The values of these natural resources are extensively discussed in the next chapter and need not be taken up here.

Taken by themselves, it will be seen that these figures indicate an aggregate investment in the various constituent concerns, plus $25,000,000 new working capital, of, roughly, $676,000,000, or less than one-half the total securities of the Steel Corporation issued to acquire them (including underlying bonds in each case). It should be remembered that this total of $676,000,000 is not presented as the market value of these properties in 1901, but as the value at the dates of organization of the various constituent concerns plus the subsequent investment in them up to April 1, 1901. Furthermore, the estimate is, as already stated, a tentative one. Before arriving at final conclusions as to the relation between assets and capitalization of the Steel Corporation, the valuation of its property will be taken up by other methods.

In short, the facts presented in this table are not a final conclusion; they are but evidence, to be considered with further evidence presented later, a view from but one side, which must be combined with views from other sides before any final conclusion can be drawn.

Section 17. Comparison of capitalization of Steel Corporation with market value of securities acquired.

The indicated investment in the constituent concerns of the Steel Corporation, arrived at by historical analysis of the organization of these concerns and of their earnings, in the preceding sections of this chapter, may now be compared with the market value of the securities of these various companies. In this connection it should be noted that such stock-market values (leaving out of consideration temporary factors) obviously include an allowance for earning power present and prospective, and other intangible considerations, and thus represent the value of the various companies as going concerns, whereas the valuations given in Table 12 virtually were for the tangible assets only.

The securities of several of the constituent concerns were dealt in on the New York Stock Exchange in fairly large volume, so that these market prices must be regarded as a fair reflection of the current public estimate of the value of these properties as going concerns. In the case of two companies, however—the Carnegie Company and the Lake Superior Consolidated Iron Mines—the securities were not listed on any exchange and were not dealt in in sufficient volume to make market prices a reliable indication of the public estimate of the value of these concerns. It is possible, however, to arrive at results sufficiently accurate for the comparisons here made; in any event, the figures used are sufficiently liberal. Table 13 has therefore been compiled, showing the average market valuation in 1899 and 1900 of the securities of the various companies acquired by the Steel Corporation in 1901, based upon weekly quotations, where such quotations are available.

TABLE 13.—APPROXIMATE MARKET VALUATION OF SECURITIES ACQUIRED BY UNITED STATES STEEL CORPORATION IN 1901, AS INDICATED BY AVERAGE MARKET PRICES, 1899–1900.

Constituent concern.	Amount of stock acquired by United States Steel Corporation.	Average market price of stock in 1899–1900.	Value at average price.
Stocks regularly quoted:			
Federal Steel Company—	*Par value.*	*Per cent of par value.*	
Preferred	$53,260,200	76.38	$40,680,141
Common	46,483,700	50.04	23,260,443
American Steel and Wire Company—			
Preferred	39,999,000	89.41	35,763,106
Common	49,981,400	48.26	24,121,024
National Tube Company—			
Preferred	40,000,000	94.20	37,680,000
Common	40,000,000	48.72	19,488,000
National Steel Company—			
Preferred	26,996,000	91.16	24,609,554
Common	31,970,000	41.67	13,321,899
American Tin Plate Company—			
Preferred	18,325,000	84.77	15,534,103
Common	28,000,000	34.77	9,735,600
American Steel Hoop Company—			
Preferred	14,000,000	77.34	10,827,600
Common	19,000,000	32.11	6,100,900
American Bridge Company [1]—			
Preferred	31,357,600	93.10	29,193,926
Common	30,946,400	43.88	13,579,280
Shelby Steel Tube Company [1]—			
Preferred	4,776,100	56.48	2,697,541
Common	8,018,200	10.90	873,984
Stocks not actively quoted:			
American Sheet Steel Company [1]—			
Preferred	24,499,600	[2] 65.88	16,140,336
Common	24,499,600	[2] 19.00	4,654,924
Lake Superior Consolidated Iron Mines	29,413,905	[3] 75.00	22,060,429
Carnegie Company—			
Bonds	159,450,000	105.00	167,422,500
Stock	160,000,000	[4] 100.00	160,000,000
Oliver Iron Mining Company, one-sixth interest	200,000	....	[5] 9,250,000
Pittsburg Steamship Company, one-sixth interest	221,700		
Total	[6] 881,398,405	....	686,995,290
Mortgages and purchase-money obligations	....	....	21,872,023
Underlying bonds and scrip at par	....	....	59,091,657
Cash capital	....	....	[7] 25,003,000
Grand total	....	....	792,961,970

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[1] No quotation in 1899.

[2] Mean of highest and lowest prices in Pittsburg market in 1900, weekly quotations not being available.

[3] Asked price in 1900. Does not include lower prices recorded in 1900.

[4] Only 13 shares known to have been sold in open market.

[5] Not based on stock quotations but amount of United States Steel Corporation preferred stock issued therefor at par.

[6] Does not include $535,407 unacquired stock in constituent and subsidiary concerns.

[7] Including $3,000 paid in by original incorporators.

For the first eight companies in Table 13, a satisfactory record of quotations was in most cases readily available. It may be noted that several of these companies were not organized until late in 1899 or early in 1900. In such cases quotations were used from the earliest date on which they were available to the close of 1900.

In the case of the Lake Superior Consolidated Iron Mines, the price used, $75 per share, is the highest reported in 1899 and 1900. In the early part of 1899 the stock was quoted certainly as low as $40 a share and the highest in that year appears to have been about $60. The highest in 1900 appears to have been, as just stated, $75 per share. The maximum quotation has been used rather than an average, since, on account of the inactivity of the stock and of the fact that it had never paid a dividend, the lower quotations mentioned may not be representative of a fair valuation.

The stocks of the American Sheet Steel Company were inactive. The prices here given appear to be the best available indication of their market value.

The bonds of the Carnegie Company were quoted in 1900 at about 105, and occasional sales were reported at this figure.[1] In the case of the stock, there appear to have been no recorded transactions in 1900. In the early part of February, 1901, a very few shares of this stock sold in the Pittsburg market at $1,000 per share, the par value.[2] Since at this time it was known that negotiations for the purchase of the Carnegie concern had been undertaken by the banking interests who later organized the United States Steel Corporation, this price must be considered as probably an overstatement of the real market value of the stock.[3]

While such infrequent transactions as were recorded for the stocks of the Lake Superior Consolidated Iron Mines, the American Sheet Steel Company, and the Carnegie Company obviously are unsatis-

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[1] The total reported sales of Carnegie Company bonds in the Pittsburg market in 1900, were as follows:

Date.	Amount sold.	Series.	Price (per cent of par).
November 12	$1,000	D	105
November 14	2,000	D	105
November 15	61,000	D	105
November 17	5,000	D	105
November 19	6,000	D	105
November 20	7,000	D	* 105
November 21	$156,000	D	* 105
November 22	11,000	D	* 105
November 27	1,000	D	* 105
December 3	10,000	D	105
Total	260,000	....	....

* And accrued interest.

[2] As noted in the text, there were no recorded sales of the stock of the company in 1900. The recorded sales of the stock in 1901 amounted to 13 shares, and each share brought $1,000. The sales were effected on the following dates: February 5, 3 shares; February 7, 7 shares; February 8, 3 shares.

[3] After the terms of purchase of the Carnegie Company were known, some sales of the stock were apparently made to the syndicate on a cash basis at $1,500; obviously, however, such prices must be ruled out of consideration here.

factory, nevertheless they have been used in the table as being the best available indication of the value placed upon these stocks in actual transfers.

The valuation of the securities included in the table has been obtained by multiplying the average per cent of the par values of each security by the amount of that security acquired in April, 1901, this including practically the entire amount outstanding: there were few changes of any consequence in the outstanding amounts of stock of these companies from the dates of their organization up to the time of their absorption by the Steel Corporation. Any such increases were so small that it can not be assumed that the market prices of the securities would have been different had they been made at an earlier date. It is entirely proper, therefore, to use these amounts of stock in connection with the market prices of 1899 and 1900.

No quotations were obtainable for the stocks of the Oliver Iron Mining Company or the Pittsburg Steamship Company. The one-sixth interest in these two concerns has arbitrarily been placed at the par value of the preferred stock of the United States Steel Corporation issued therefor, as was done in Table 12, on uage 167.

In addition to the cash and securities above enumerated, the United States Steel Corporation purchased the vessels of the Bessemer Steamship Company. This acquisition is included in the item of $21,872,023 of mortgages and purchase-money obligations.

Therefore, this computation of market values, which, in the case of a few companies, is admittedly unsatisfactory—due to the lack of sufficiently frequent quotations—suggests a market valuation for the various securities acquired by the United States Steel Corporation of, roughly, $687,000,000. In order to permit of comparison with the total capitalization and with the estimate of the value of the physical properties arrived at by historical analysis, as given on page 167, there should be added $25,003,000 to cover the cash capital provided for the Corporation, $21,872,023 for mortgages and purchase-money obligations, and $59,091,657 to cover underlying bonds and scrip at par (market quotations not being available). The addition of these amounts gives a total indicated market valuation of $793,000,000.[1]

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[1] These average weekly market prices do not include prices for the first three months of 1901, or just preceding the organization of the Steel Corporation. This period has been excluded for the reason that during a considerable part of these three months quotations of these steel stocks were directly influenced by the pending organization of the Steel Corporation. It is true that in January, 1901, there was a rather severe break in the prices of some of these steel securities, but this was succeeded by an almost sensational advance, due to the prospect that these companies would be merged on terms very favorable to the old stockholders. Since the year 1899, as already shown, was one of phenomenal prosperity in the iron and steel trade, and the year 1900, despite a severe setback, one of distinct prosperity, it is altogether fair, in arriving at an average market valuation, to exclude from consideration the abnormal quotations reached in the early part of 1901, as a result of the prospect of a merger of these great consolidations into a single corporation. In other words, the high prices recorded for some of these securities just prior to the organization of the United States Steel Corporation can not be regarded

This market valuation of $793,000,000 exceeds the estimate arrived at in the preceding section of $676,000,000 by $117,000,000. This difference is more than accounted for by the fact that whereas in Table 12 only the physical property of the Carnegie Company was considered, this being placed at $197,563,000 (including the surplus of $37,563,000), in Table 13 an estimate of the value of the intangible considerations is included, making the total for the Carnegie Company, roughly, $327,400,000.

The stock-market valuation represents the values of these properties as going concerns, including prospective values, and thus allows for intangible considerations and not merely for the tangible property. Therefore, it is altogether natural that such stock-market valuations should exceed the value of the physical property alone, and especially as the period covered was on the whole one of prosperity in the industry. Indeed, a much larger excess of market valuation over the tangible-property valuation than is here shown would be entirely normal, assuming the value of tangible property to be correct. In fact, it will be observed that if the additional value here given the Carnegie Company were eliminated ($129,855,900), the resultant total valuation by this method would be less than the valuation of $676,000,000 arrived at in the preceding section for tangible assets only. If all of the market quotations were entirely satisfactory, this result might warrant scaling down the previous estimate of the tangible properties. Since, however, these market quotations are in some cases admittedly unsatisfactory and since, moreover, the Bureau desires to present the results obtained by each different method (see p. 116) on their own respective merits, no such reduction in the previous estimates for the tangible property need be considered at this time. As already noted, the estimates of the Bureau obtained by the various methods employed are brought together and summarized in Chapter IV.

Section 18. Comparison of prices paid by United States Steel Corporation for securities of constituent concerns with average market prices of the latter.

The great excess of securities issued by the United States Steel Corporation over the aggregate of securities which it acquired has already been clearly brought out, both by the total figures and by the terms of exchange given in Table 4, on page 113. A comparison of these rates of exchange with the average market values of the

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as a fair indication of the value of these companies, but rather as an expression of the value of monopolistic power, or, at least, of concentrated power, which was anticipated from the still greater merger.

However, had the average market prices for the three months from January 1, 1901, to April 1, 1901, been included with the average prices for the two preceding years, the aggregate market valuation of the securities (including cash and underlying bonds at par) would have been only about $799,000,000, or not materially different from the total obtained by using the average prices of 1899 and 1900.

constituent stocks in 1899 and 1900, as shown in Table 13, is given in the following table:

TABLE 14.—COMPARISON OF RATES OF EXCHANGE OF UNITED STATES STEEL STOCKS FOR STOCKS OF CONSTITUENT CONCERNS, WITH AVERAGE MARKET VALUES OF LATTER IN 1899 AND 1900.

Constituent concern.	Average market price of stock in 1899–1900.	Received in United States Steel securities per $100 of old par value.		
		Preferred stock.	Common stock.	Bonds.
Carnegie Company:				
Bonds	105.00			100.00
Stock, 60 per cent	[1] 100.00			150.00
Stock, 40 per cent	[1] 100.00	[2] 153.50	[2] 141.00	
Federal Steel Company:				
Preferred	76.38	110.00		
Common	50.04	4.00	107.50	
American Steel and Wire Company:				
Preferred	89.41	117.50		
Common	48.26		102.50	
National Tube Company:				
Preferred	94.20	125.00		
Common	48.72	8.80	125.00	
National Steel Company:				
Preferred	91.16	125.00		
Common	41.67		125.00	
American Tin Plate Company:				
Preferred	84.77	125.00		
Common	34.77	20.00	125.00	
American Steel Hoop Company:				
Preferred	77.34	100.00		
Common	32.11		100.00	
American Bridge Company: [3]				
Preferred	93.10	110.00		
Common	43.88		105.00	
Shelby Steel Tube Company: [3]				
Preferred	56.48	37.50		
Common	10.90		25.00	
American Sheet Steel Company: [3]				
Preferred	[4] 65.88	100.00		
Common	[4] 19.00		100.00	
Lake Superior Consolidated Iron Mines: Common	[5] 75.00	135.00	135.00	

[1] Only 13 shares known to have been sold in open market. (See note 2 on page 171.)

[2] In the case of the Carnegie Company the rates of exchange were not officially stated, and apparently they were not the same for all holders. The actual amounts of United States Steel securities used by the underwriting syndicate (not directly by the Corporation) to acquire the securities of the Carnegie Company were, however, stated in the preliminary report of the Corporation, as follows:

> The syndicate acquired 60 per cent ($96,000,000) of the stock of the Carnegie Company and $159,450,000, face value, of the 5 per cent bonds of the Carnegie Company by delivering to the holders thereof said $303,450,000 of bonds of this Corporation and $1,200,000 in cash; and the syndicate acquired the remaining 40 per cent ($64,000,000) of the stock of the Carnegie Company by delivering to the holders thereof 982,771 shares of preferred stock and 902,790 shares of common stock of this Corporation.

The deduction from the total of bonds issued, namely, $303,450,000, of $159,450,000, to represent Carnegie bonds (exchanged at par) leaves a balance of $144,000,000, which was issued for $96,000,000 of Carnegie stock, thus indicating a rate of $150 in bonds for each $100 in stock. Presumably these exceptionally favorable terms were secured chiefly by Mr. Carnegie, who held just about 60 per cent of the Carnegie Company's stock.

It is not certain whether the $1,200,000 cash was used to buy preferred stock or bonds. Including the cash, the ratio would be slightly higher.

For the remaining 40 per cent of the stock of the Carnegie Company the amounts given in the above excerpt from the annual report averaged $153.50 in new preferred and $141 in new common for every $100 of this Carnegie stock. The syndicate apparently offered in most cases 150 in United States Steel preferred and 150 in United States Steel common stock; but varied the terms in other instances.

[3] No quotations in 1899.

[4] Mean of highest and lowest prices in Pittsburg market in 1900, weekly quotations not being available.

[5] Asked price in 1900. Does not include lower prices recorded in 1900.

It will be seen from this table that in every case, except the Shelby Steel Tube Company, the amounts of stock issued by the Steel Corporation were in excess of the average market values of the corresponding stocks acquired, and usually very greatly in excess. The overissue of securities in the case of the Carnegie Company has been sufficiently discussed and need not be referred to in detail here. For each share of the preferred stock of the Federal Steel Company, the average market value of which in 1899 and 1900 was $76.40 per share, the Steel Corporation issued $110 in its preferred stock. Corresponding figures in the case of the American Steel and Wire Company preferred were, roughly. $89.40 and $117.50. The highest rates of exchange with respect to preferred stocks, it will be seen, were accorded the American Tin Plate Company, the National Tube Company, and the National Steel Company.[1] It is worth pointing out that no preferred stock of a constituent concern, with the single exception of the Shelby Steel Tube (which was acquired at a subsequent date), received less than its par value in United States Steel preferred.

The overissue of common stock of the Steel Corporation was even more marked. With the single exception of the Shelby Steel Tube none of the common stocks of the constituent companies received less than its par value in common stock of the Steel Corporation, while several of them received well over the par value in new common and in several cases an additional issue of preferred stock of the Steel Corporation as well. A conspicuous instance of this was in the case of the American Tin Plate Company, the common stock of which received $125 in new common for each $100 common of the old, and in addition $20 in new preferred.

The exceptionally favorable terms accorded the Lake Superior Consolidated Iron Mines, namely, $135 in new preferred and $135 in new common stock for each $100 of old stock, are worthy of special notice. The Lake Superior Consolidated Iron Mines, as already pointed out, was owned by Standard Oil interests and was acquired after most of the larger steel companies included in the list. Owing to the fact that this company not only had very extensive ore reserves but also an important ore railroad, and more especially to its exceptionally strong financial backing, it was practically in a position to dictate its own terms, and apparently did so.

In view of this great increase of capitalization by the Steel Corporation, it is worth repeating that this followed very heavy inflation of securities in the organization of nearly all of the constituent concerns, while in some cases the latter in turn had issued their securities at very much in excess of those which they in turn had acquired. As a conspicuous illustration, the inflation of capitalization by the wire combinations may be noted. Thus, each $100 stock of the Consolidated Steel and Wire Company, organized in 1892, received in 1898 $175 in preferred stock and $175 in common stock of the American Steel and Wire Company of Illinois, or $350 of new securities for every $100 of old. A few months later each $100 of the preferred stock of the American Steel and Wire Company of Illinois received $100 in preferred stock and $60 in common stock of the American Steel and Wire Company of New Jersey, while each $100 of the Illinois concern's common stock received $120 in common stock of the New Jersey concern. Thus, each $100 stock of the old Consolidated company became $490 in the stock of the New Jersey concern. In the final merger of the latter company into the Steel Corporation each $100 par value of the preferred stock received $117.50 in preferred stock of the Steel Corporation, while each $100 (par value) of the common stock received $102.50 in United States Steel common stock. In other words, every $100 par of the stock of the Consolidated Steel and Wire Company was finally transmuted into $528.50 par of Steel Corporation securities. This is perhaps the most striking instance of repeated increase of securities afforded in the history of the Steel Corporation, but the increase in many other cases was also very great.

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[1] In this connection it should be stated that the organizers of the Steel Corporation allotted a solid block of stock for the "Moore" companies and that the suballotment of that stock by companies and by different classes of stock was made by the dominating interests in this group and not by the organizers of the Corporation. (See Exhibit 4, p. 396.)

Of course, the value of these properties may have increased greatly in this interval, so that it should not be understood that the entire amount of the increase represented nothing but "water."

The evidence in this chapter shows that whatever the actual value of the securities acquired by the Steel Corporation may have been it was very much less than the par value of the United States Steel securities issued therefor. The extent of such overvaluation is discussed in Chapter IV, where the estimates of the value of the property given in this chapter are summarized in connection with those obtained by another method.

Section 19. Large amounts of securities issued by constituent concerns for promotion services.

A very striking illustration of the inflation of securities by these various consolidations, and one which may fairly be considered in judging the general relationship of their capitalization to investment, is afforded by the large payments made for promotion and underwriting services. Such payments, which are over and above the usual bonus in common stock given with preferred for an equivalent amount of cash or property, aggregate for seven of the concerns above described, no less than $63,300,000 stock, this including in one instance about $850,000 of preferred. These figures, moreover, do not include any allowance for the American Sheet Steel Company, which almost certainly made payments of the same sort, or for the Shelby Steel Tube Company. The facts regarding such payments or commissions, which have already been briefly referred to in the preceding discussion, may here be summarized.

Federal Steel Company.—As shown on page 118, the underwriting syndicate of the Federal Steel Company was to provide $14,075,000 cash (this including $200,000 for organization expenses). The syndicate, however, secured most of this cash from the stockholders of the constituent concerns of the Federal Steel Company in the manner already described, so that the actual amount of cash raised by the syndicate, as such (as distinct from any amounts which syndicate members may have subscribed as stockholders in the acquired concerns), was apparently but $4,823,373. In return for this cash payment and its services the syndicate received a residue of Federal Steel stocks amounting, at par, to about $5,680,565 preferred and $8,422,992 common. Assuming that for the cash provided the syndicate received 100 per cent in preferred and a bonus of 100 per cent in common, there would be left, roughly, $850,000 of Federal Steel preferred and $3,600,000 Federal Steel common stock, which may be regarded as the compensation of the syndicate for its services and profit as distinct from any payment for the new cash capital provided, as follows:

	Preferred stock.	Common stock.
Stock received by syndicate	$5,680,565	[1]$8,422,992
Amount allowed to cover cash raised by syndicate	4,823,373	4,823,373
Balance to cover "services" of syndicate	857,192	3,599,619

[1] Includes $3,000 incorporators' stock.

While, however, the syndicate commission in the case of this company apparently included a small amount of preferred stock, it will be recalled that the common stock of the company had some tangible property back of it at the start.

American Steel and Wire Company of New Jersey.—As shown on page 132, at the organization of this company a syndicate raised $28,000,000 of cash, for which it received $28,000,000 of preferred stock and $28,400,000 of common stock, or the entire issues of each class over and above the amounts paid for the old American Steel and Wire Company of Illinois. Subscribers to the syndicate received with each $100 preferred stock paid for at par a bonus of $60 in common stock, or in the aggregate $16,800,000. This left a balance of $11,600,000 of common stock unaccounted for, as shown below:

	Preferred stock.	Common stock.
Total amount issued to the syndicate	$28,000,000	$28,400,000
Paid syndicate subscribers for $28,000,000 of cash	28,000,000	16,800,000
Balance		11,600,000

This residue of $11,600,000—which, it will be seen, is entirely distinct from the common-stock bonus paid in connection with cash subscriptions to preferred stock—went to those who managed the organization of the company as their compensation or commission.

American Tin Plate Company.—Testimony before the Industrial Commission (see p. 135) showed that $10,000,000 of the common stock of this company went to the organizers as their compensation, this being over and above the $18,000,000 of common stock issued as a bonus with the preferred stock for property and cash. It is possible that not all of this $10,000,000 commission was retained by the promoters, since they had to meet certain expenses of organization—usually small—and, moreover, it is possible that in some cases the promoters offered certain of the concerns entering the consolidation a special bonus in common stock in order to secure such concerns. Such special allowances may have reduced the net amount of the commission.

National Steel Company.—It appears from the testimony before the Industrial Commission (see p. 137) that $5,000,000 of the common stock was issued for the "expenses of organization"; in other words, that it went to the promoters for their services and expenses.

American Steel Hoop Company.—In the case of this concern also it appears that at least $5,000,000 of common stock was retained by the organizers as their commission. (See p. 139.)

American Sheet Steel Company.—As already stated the exact facts concerning the promotion of this company are not obtainable. However, the evidence (see p. 140) indicates that the properties and cash acquired by this company probably did not exceed $16,000,000 (although the Bureau has allowed $17,000,000), for which apparently $16,000,000 preferred and $16,000,000 common stock were issued, so that possibly there is ground for the assumption that the remaining issued amounts of each class of stock may have been retained by the promoters as their compensation. This can not, however, be stated as a definite fact. Therefore, nothing has been included for that company in this computation.

National Tube Company.—In the promotion of this company it appears that $20,000,000 of the $40,000,000 common stock issued was given as a bonus with the $40,000,000 of preferred stock in payment for properties or for cash. The remaining $20,000,000 of common stock apparently went to the organizers as a commission, although a part of this may have been distributed by them to banking interests as commissions for assisting in raising cash capital.

American Bridge Company.—In the case of this concern the exact amount of stock issued as a commission is somewhat uncertain, owing to somewhat unusual methods of financing. It seems, however, that at least $7,250,000 of the common stock represented such a commission, and possibly a larger sum.

Shelby Steel Tube Company.—In the case of the Shelby Steel Tube Company, as shown in note 1, page 144, $1,305,900 of the common stock was allotted for organization expenses. Just how much of it represented a commission is not known, and as the total amount is small in comparison with the other payments here discussed it has been omitted.

Carnegie Company.—In the organization of the Carnegie Company no promoters or bankers were employed and apparently no stock was issued for commissions.

Lake Superior Consolidated Iron Mines.—The Bureau secured no information as to whether any of the stock of this concern was issued to the promoters, and it has been assumed that despite the heavy overcapitalization of the company at the time of its organization no stock was issued for this particular purpose. The company, it will be recalled, was organized in 1893.

The total of these various commissions, not including anything for either the American Sheet Steel Company or the Shelby Steel Tube Company, was $63,306,811, as follows:

Table 15.—AMOUNTS OF STOCK ISSUED BY CONSTITUENT CONCERNS OF STEEL CORPORATION FOR COMMISSIONS TO PROMOTERS (EXCLUSIVE OF BONUS STOCK ISSUED FOR PROPERTIES OR FOR CASH).

Company.	Common stock "commission."	Company.	Common stock "commission."
Federal Steel	[1] $4,456,811	National Tube	$20,000,000
American Steel and Wire	11,600,000	American Bridge	7,250,000
American Tin Plate	10,000,000	Total	[2] 63,306,811
National Steel	5,000,000		
American Steel Hoop	5,000,000		

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[1] Includes $857,192 of preferred stock.

[2] No amounts are here entered for the American Sheet Steel Company, for reasons given in the text, nor is anything entered in the case of the Shelby Steel Tube Company.

It should once more be stated that this total does not include the large amounts of common stock of these constituent companies issued as a mere bonus with preferred stock for property or cash. Out of the commissions above described the promoters sometimes had to meet certain expenses, but in general such expenses were small, and these commissions, or the proceeds realized therefrom, represented the compensation of the promoters and organizers.

CHAPTER III.

VALUATION OF TANGIBLE PROPERTY OF THE STEEL CORPORATION IN 1901 BY DEPARTMENTS OF ITS BUSINESS.

Section 1. Introductory.

In the preceding chapter the value of the property of the United States Steel Corporation at the date of its organization has been discussed by the first and second methods outlined on page 116, namely, by historical study of the organization and investment of the constituent concerns, and by the computation of the market values of the securities of these concerns. It now remains to discuss the value of the tangible property of the Corporation by the third method referred to, namely, by departments of its business. Such a valuation is taken up in the present chapter. With reference to the properties other than ore, this discussion is in part a summary and reclassification of facts brought out in Chapter II. The valuation of the ore property is approached by several different methods, and, on account of its importance, is given a separate division of the chapter.

Section 2. Estimate filed by the Corporation in the Hodge suit in 1902.

In undertaking the valuation of the properties of the Corporation by departments of its business for 1901, it will be found convenient to refer to an estimate of the physical assets made by officials of the Steel Corporation themselves in their defense of the so-called "Hodge suit." This suit was brought in 1902 to prevent the company from issuing $200,000,000 of bonds to retire a like amount of preferred stock. The laws of New Jersey required a certificate from officers of the Corporation to the effect that its assets were equal to the preferred stock, after allowing for indebtedness, as a prerequisite to such conversion of any part of the preferred stock into bonds. One of the main points raised by the plaintiffs in this suit was that the Corporation did not thus possess assets equal to the amount of its preferred stock, after allowing for prior indebtedness.

In reply to the charge of deficiency of assets in this particular, an estimate of the physical properties of the Corporation was filed by Charles M. Schwab, then its president, these valuations being subscribed to by several other prominent officials of the Corporation.

This estimate, which classified the property by the principal departments of the business, follows:

TABLE 16.—ESTIMATE OF VALUE OF TANGIBLE ASSETS OF UNITED STATES STEEL CORPORATION ON JULY 1, 1902, SUBMITTED BY THE CORPORATION IN THE HODGE SUIT.

Ore properties	$700, 000, 000
Plants, mills, fixtures, machinery, equipment, tools, and real estate	300, 000, 000
Blast furnaces	48, 000, 000
Coal and coke	100, 000, 000
Transportation properties	[1] 80, 000, 000
Natural gas fields	20, 000, 000
Limestone properties	4, 000, 000
Cash and cash assets	[2] 148, 291, 000
Total	1, 400, 291, 000

[1] President Schwab stated that the Corporation's estimate for this item was the value after allowing for $40,340,000 of indebtedness. (See note, p. 197.)

[2] As of June 1, 1902. (See note 3 to Table 23, p. 234.)

Except in the case of the transportation properties, where, as noted, the valuation of $80,000,000 was the estimated valuation after allowing for indebtedness, the figures here given represent the Corporation's estimate of the entire value of the different classes of property without respect to the securities issued against them; that is to say, they do not represent merely the equity value in these properties for the stockholders of the Corporation over and above bonded indebtedness. The valuations arrived at by the Bureau in this chapter likewise are for the total tangible property, without respect to the securities outstanding against it. In comparing its figures with those of the Corporation, the Bureau has restored the indebtedness of railroad companies which was deducted by the Corporation's officials.

The main purpose of this chapter is to arrive at as accurate a valuation of the properties of the Steel Corporation as is possible, rather than to discuss at length the above estimate of the Steel Corporation. It is, however, desirable to consider this estimate of the Corporation in connection with the following analysis by the Bureau; an especial advantage in this method of treatment is that the figures in the Corporation's estimate can be regarded as invariably fixing maximum limits of valuation. The estimate of the Corporation in connection with the Hodge suit was submitted at a time when there was a powerful motive before its officers to overvalue its assets. It is apparent that after placing liberal valuations upon all the property other than ore the officers making this estimate credited the ore with an amount sufficient to bring the Corporation's total assets up to more than the total of its outstanding securities. As shown later, this valuation for the ore was very excessive.

It should be kept in mind that this estimate by the Corporation was made in July, 1902. By that time the property of the Corporation had been increased through surplus earnings and also, to a small extent, by capital raised or property acquired through the issue of additional securities, so that the total investment was somewhat greater than it was in April, 1901. If a precise comparison of the Bureau's estimate with these estimates of the Corporation was desired, with a view to carefully reconciling differences between them, it would be necessary to determine how this additional investment was distributed among the different departments of the Corporation's business. For the present purpose this is not necessary. It should, however, be kept in mind that the valuations of the Bureau in this chapter are applicable as of the date of the company's organization on April 1, 1901, while those of the Corporation, above given, were made in July, 1902.

Mr. Schwab, in his affidavit in behalf of the Corporation, said:

> The foregoing items of valuation do not include any allowance for the value of the good will and established businesses of the various plants and properties, nor do they include anything for the very valuable patents, trade-marks, and processes owned or controlled, or anything for the large amount of orders for manufactured goods which have been actually received and are in process of filling.

In other words, Mr. Schwab claimed very emphatically that the Corporation's estimate did not include an allowance for intangible considerations, so that comparison may properly be made with the Bureau's figures later presented, which are for tangible property only.

I. VALUE OF PROPERTIES OTHER THAN ORE.

Section 3. Value of manufacturing plants, and connected real estate.

The manufacturing plants of the Steel Corporation (including real estate for plant sites, etc.) other than coke properties and blast furnaces, were entered in the Corporation's 1902 estimate at $300,000,000, and the blast furnaces at $48,000,000, making a total for what may be called the iron and steel works proper, and real estate for plant sites, of $348,000,000.

From the facts given in Chapter II, it is possible to present an independent estimate for these manufacturing properties as they were in April, 1901. Thus, in the case of the Federal Steel Company, the steel works, blast furnaces, and similar equipment were those of the Illinois Steel Company and of the Lorain Steel Company (and the Johnson Company), since the Minnesota Iron Company and other subsidiary concerns of the Federal company had no property of this character. The real estate and manufacturing plants of the Illinois Steel Company were entered in its balance sheet of June 30, 1898, at approximately $20,200,000. (See p. 121.) Since that balance sheet stated separately the investment of the company in railroad stocks, coke properties, and current assets, this book figure may be taken as the investment in steel works, blast furnaces and similar plants, and real estate at that date. As shown in Chapter II, there is good reason for the opinion that all of the book valuations of the company were sufficiently liberal.[1]

The properties of the Lorain and Johnson companies at the time of their acquisition by the Federal Steel Company, it will be recalled, were valued at approximately $4,000,000. This entire amount may be credited to manufacturing plants.

The manufacturing properties and blast furnaces of the Carnegie Steel Company (Ltd.) at the organization of the Carnegie Company of New Jersey, in March, 1900, may be taken, as previously shown (see p. 155), at the book value of $43,355,000.

In the case of the other constituent concerns, the values of the manufacturing plants can not thus be directly taken from balance sheets. However, as already shown in Chapter II, in the case of nearly all these other companies the value of the entire property did not exceed their respective issues of preferred stock, and, moreover, such property at the dates of their organization consisted of only two general classes, namely, manufacturing plants and working capital. The working capital is known in practically every instance, so that by deducting this from the amount of preferred stock issued in each respective case there is obtained an approximate valuation of the manufacturing plants. Thus, in the case of the American Steel and Wire Company the value of all the tangible assets was placed at $40,000,000 (see p. 131), the amount of preferred stock issued. The company had $16,600,000 net working assets, leaving $23,400,000 as substantially the value of the plants.

The total value of the tangible assets of the American Tin Plate Company (see p. 136) at its organization was approximately $18,000,000, the amount of preferred stock originally issued, to which should be added $325,000 subsequently issued at par to acquire the plant of the Canonsburg Iron and Steel Company. The company started with about $4,500,000 of working capital. The difference of $13,825,000, therefore, substantially represents the value of the manufacturing plants.

In the case of the National Steel Company, the value of the property at the time of its organization—over and above $2,561,000 of bonded indebtedness later allowed for—has been placed (see p. 137) at $27,000,000, the amount of preferred stock issued (this including $1,000,000 issued some time after the company's organization). The company had $9,000,000 of current assets, thus leaving $18,000,000 to cover the remaining property. This entire amount has been credited to the manufacturing properties of the company, since its other fixed properties were not of sufficient importance to necessitate an allotment of this balance.

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[1] The Illinois Steel Company had a small amount of ore lands, but apparently this was not included in the figure just given. At any rate, any allowance for ore property included in that figure would be so small that no deduction need be made for it here.

A similar method of computation in the case of the American Steel Hoop Company indicates that the value of the manufacturing plants was the difference between $14,000,000, the total amount of preferred stock issued, and the original working capital, $3,000,000, or a total of $11,000,000. This valuation for the manufacturing plants is probably too liberal, for reasons already shown.

The valuation of the National Tube Company's manufacturing plants may likewise be arrived at by deducting from $40,000,000, the estimated total value of all its assets (as expressed by the par value of the preferred stock), the $16,000,000 of net current assets with which the company commenced business, the company having practically no other kind of property at its organization. This leaves $24,000,000 for the manufacturing properties.

The property of the American Bridge Company likewise consisted almost exclusively of manufacturing plants and current assets. The combined value of both has been taken at the par value of the preferred stock issued, $31,374,000 (this including some stock issued subsequent to the formation of the company). Since the company had $11,500,000 of working capital at the start, $19,874,000 is left for the manufacturing plants.

In the case of the American Sheet Steel Company, it will be recalled (see p. 140) that the tangible assets of every description were not equal to the amount of preferred stock issued, and that the manufacturing plants apparently had been valued for purposes of consolidation at $12,000,000. From the evidence already given, it is clear that such a valuation is sufficiently large. An addition of $1,000,000 has, however, been made to cover certain detached real estate.[1]

The plants of the Shelby Steel Tube Company at the time of the acquisition of that concern by the United States Steel Corporation had suffered heavy depreciation. As shown in Table 4, on page 113, the Steel Corporation issued, roughly, $1,800,000 of its preferred stock and $2,000,000 of its common stock in exchange for the preferred and common stock of the Shelby Steel Tube Company which it acquired (this being the great bulk of the entire issue in each case). The market value of United States Steel stock thus issued was about $2,800,000, which would indicate a market valuation for the entire Shelby Steel Tube property of, roughly, $3,000,000. An allowance of

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[1] The company also had natural-gas property valued at about $2,000,000. This has been considered as offsetting the $2,000,000 bonded debt of the company, and this latter item, therefore, does not require consideration here. The natural-gas property is valued later. (See p. 200.)

$2,500,000 to cover the manufacturing properties alone might be considered reasonable, but since the entire amount is so small these manufacturing properties have been credited in the Bureau's estimate with a value of $3,000,000.[1]

The Lake Superior Consolidated Iron Mines had no manufacturing plants. Its railroad and ore properties, like those of the other subsidiary concerns, are discussed elsewhere in this chapter.

The one-sixth interest in the Pittsburg Steamship Company and in the Oliver Iron Mining Company likewise need not be considered here, since neither of these concerns had any manufacturing properties.

It should be observed that in the case of a few of these concerns the valuations arrived at by the Bureau represent the equity in the property over and above certain bonded indebtedness. Thus, the valuation of $18,000,000 for the manufacturing properties of the National Steel Company represents the stockholders' equity in this property, after allowing for $2,561,000 of outstanding bonds. A few of the other subsidiary manufacturing companies likewise had small amounts of underlying indebtedness. In an estimate of the value of the manufacturing properties as distinct from the stockholders' equity therein, an amount equivalent to such indebtedness should be added, since it may be assumed that such bonds represent a corresponding investment in the property. The total addition on this account is $3,000,000. In the case of the American Sheet Steel Company there were $2,000,000 of underlying bonds, but these, as already noted, have been considered as representing an equivalent investment in natural-gas property rather than in manufacturing plants; therefore no addition on this account need be made at this point.

The Illinois Steel Company also had a large issue of bonds, most of which presumably were issued against manufacturing properties, and a considerable part of the large issue of the Carnegie Company may be considered as having been issued against such properties. In the case of these companies, however, the bonded indebtedness need not be considered, since the valuations above given were the full valuations as shown in the balance sheets, and not merely an expression of the stockholders' equity therein.

The other subsidiary manufacturing companies of the Steel Corporation had no bonded indebtedness at their organization. In a few cases additional bonds were subsequently issued or assumed, particularly by the American Steel and Wire Company and the National Steel Company, but since practically all of the added investment represented by such increase in indebtedness was incurred in the purchase of property other than manufacturing plants—principally steamships, ore, and coke—such additional issues may be disregarded in this discussion of the value of the manufacturing plants proper.

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[1] The use of the market value of the securities issued by the Steel Corporation as a criterion for judging the value of the property acquired is as a rule incorrect, particularly at the time of merging various competing concerns (see p. 210), but in this instance, owing to the sharp reduction in capitalization and to the comparatively small amount involved, it is justifiable.

Except in the cases noted, none of these companies increased their stock issues up to the time they were absorbed by the United States Steel Corporation.

On the basis of the foregoing discussion, the values of the steel works, blast furnaces, and similar manufacturing properties (including real estate) of the companies acquired by the United States Steel Corporation *at the dates of their respective organizations* were substantially as follows:

TABLE 17.—BUREAU'S ESTIMATE OF INVESTMENT OF CONSTITUENT COMPANIES OF UNITED STATES STEEL CORPORATION IN MANUFACTURING PLANTS (INCLUDING BLAST FURNACES) AND REAL ESTATE AT THE DATES OF THEIR RESPECTIVE ORGANIZATIONS.

Company.	Preferred stock issued.	Current assets at organization.	Balance to represent plants.
American Steel and Wire Company	$40,000,000	$16,600,000	$23,400,000
National Steel Company[1]	27,000,000	9,000,000	18,000,000
American Tin Plate Company[1]	18,325,000	4,500,000	13,825,000
American Steel Hoop Company	14,000,000	3,000,000	11,000,000
National Tube Company	40,000,000	16,000,000	24,000,000
American Bridge Company[1]	31,374,000	11,500,000	19,874,000
Other companies:			
Carnegie Company (book value)			43,355,000
Federal Steel Company—			
Illinois Steel Company (book value)			20,200,000
Lorain and Johnson companies (approximate cash price)			4,000,000
Shelby Steel Tube Company (approximate cash price)			3,000,000
American Sheet Steel Company (estimated)			13,000,000
Add to cover investment in manufacturing plants represented by miscellaneous bonds			3,000,000
Total			196,654,000

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[1] In the case of this company the preferred stock here given includes a small amount issued soon after the organization of the company.

This grand total of $196,654,000 may, in view of the preceding discussion, fairly be considered as an approximate measure of the value of the steel works, blast furnaces, real estate, etc., of the various constituent companies of the Steel Corporation, these—except in the case of the Shelby Steel Tube Company—being the values at the time of organization. As pointed out in Chapter II, during the period from such dates to April 1, 1901 (when the Steel Corporation was organized), the investments of these constituent concerns in their manufacturing plants had been increased from surplus earnings. The accumulated surplus earnings of all the constituent companies on April 1, 1901, were approximately $117,700,000, the great bulk of this being contributed by the companies immediately under discussion. A considerable part of this aggregate surplus had been invested in ore, coal and coke, and transportation properties, and there presumably had been some addition to working capital. A part of the original working capital also had been invested in fixed properties, but the net additions from this source and from capital raised through new securities apparently were small.

The total amount which had been thus invested in manufacturing plants can not be precisely stated. However, it may be noted that the Steel Corporation itself made an appraisal of its assets as of January 1, 1908 (see pp. 313–318), in which the iron and steel manufacturing properties were valued at approximately $367,600,000, exclusive of the cost of the new Gary, Ind., plant, and of the Tennessee Coal, Iron and Railroad Company, which had been acquired as of November 1, 1907. The records of the Steel Corporation show that there was added to manufacturing plants by new construction and by purchases of competing companies (again excluding the Gary and Tennessee properties) during the period from April 1, 1901, to January 1, 1908, a net total of approximately $114,500,000 (see Table 41, p. 314), this figure allowing for any depreciation of these properties which had not been restored by expenditures thereon. (This question of depreciation is fully taken up in Chapter VI.) Deducting this sum from the Corporation's estimate of $367,600,000, above given, leaves $253,100,000 as the indicated investment in the manufacturing properties on April 1, 1901.

The Corporation's valuation of $367,600,000 at the end of 1907, however (and consequently the resulting figure of $253,100,000 for 1901), includes real estate at values very much higher than those prevailing in 1901. Allowing for this fact, this 1907 appraisal of the Corporation does not indicate a valuation for the Corporation's manufacturing plants in April, 1901, in excess of $250,000,000. The Bureau has determined upon this figure as a liberal expression of the value of these manufacturing properties at that time.[1] This total is more than $50,000,000 greater than the total indicated value of the manufacturing plants of the constituent concerns at their respective dates of organization, as given in Table 17. There can be little doubt that this excess is more than sufficient to cover all net capital additions to the manufacturing properties of these subsidiaries during the periods that they were in operation prior to April 1, 1901.

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[1] Aside from additions to the value of manufacturing plants through surplus earnings, it might be argued that the values of these plants had increased by April, 1901, on account of appreciation. It is possible that in some cases there was some increase of this sort. On the other hand, there had been heavy depreciation of some of the manufacturing property of the various constituent concerns through dismantling operations and otherwise. Still again, the original cash option prices of many of these plants, as described in Chapter II, and on which these estimates of the Bureau are in large measure based, undoubtedly were in many cases high. Altogether, therefore, it would be unwarranted to assume any significant net increase in the value of these manufacturing properties prior to April 1, 1901, due to appreciation as distinct from increase due to the investment of surplus earnings or of additional capital otherwise obtained.

Section 4. Investment in transportation properties.

It will be noted that the Corporation's estimate, given on page 182, does not distinguish the value of railroad properties from that of steamship and dock properties, but gives the value of the group of transportation companies as a whole at $80,000,000, after deducting bonded indebtedness of $40,340,000. In other words, the Corporation placed a total valuation on the tangible property of this entire group of approximately $120,000,000.[1]

RAILROAD PROPERTIES.—The Corporation's estimate of these railroad properties was undoubtedly based upon a more detailed estimate submitted in another affidavit in this same Hodge suit by James H. Reed, president of several of the railroad concerns of the Steel Corporation. Mr. Reed in his affidavit stated that the total construction costs of the six leading railroads of the Corporation were as follows:

Pittsburg, Bessemer and Lake Erie	$30, 000, 000
Duluth and Iron Range	15, 763, 000
Duluth, Missabe and Northern	11, 000, 000
Chicago, Lake Shore and Eastern	6, 400, 000
Elgin, Joliet and Eastern	15, 000, 000
Union Railroad	8, 000, 000
Total	86, 163, 000

A deduction from this total should at once be made for the purposes of this discussion, because the Steel Corporation had only a 52 per cent interest, approximately, in the Pittsburg, Bessemer and Lake Erie. The remaining 48 per cent would, on the basis of Mr. Reed's estimate, represent a total construction cost of $14,400,000. Deducting this sum from the grand total of $86,163,000, as above given, leaves a total of $71,763,000 as the revised statement of construction cost of the 6 railroads. It should be distinctly understood that this total of $71,763,000 is not the value of the Steel Corporation's equity in these railroads, since several of these had outstanding issues of bonds which ranked ahead of the securities owned by the Steel Corporation. This present discussion, however, has reference to the value of these railroad properties as a whole and not merely to the equity which the Steel Corporation held in them. The question of bonded indebtedness, therefore, need not be considered at the moment.

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[1] See note to Table 16, p. 182.

A further deduction from the above total should be made for the reason that inasmuch as Mr. Reed's affidavit was submitted in July, 1902, his figures included additions to this railroad property made by the Steel Corporation since its organization in April, 1901. Such additional expenditures in the nine months of 1901 amounted to $2,375,175. For the entire calendar year 1902 they amounted to $2,988,926. The expenditures for the first half of 1902 (the portion of that year covered by Mr. Reed's affidavit) are not known, but assuming that one-half the total for that year was expended in the first six months, the total capital expenditures on the transportation properties from April 1, 1901, to July 1, 1902, would be approximately $3,870,000. Deducting this sum from the above total of $71,763,000, gives a net total of, roughly, $68,000,000.[1]

In addition to the 6 principal railroads above enumerated, the Steel Corporation owned a number of small roads, a list of which is given on page 191. The aggregate mileage of these miscellaneous roads was small, and the aggregate of their capital securities on June 30, 1901, was only about $2,800,000. Of this $2,000,000 represented the capital stock of the Lake Terminal, the investment back of which was not over one-half that figure. An allowance of $2,000,000 to cover the valuation of these small roads would probably be sufficiently high. Adding this to the total of $68,000,000, as above arrived at, would give a grand total of $70,000,000 as the investment in these roads in April, 1901.

There is good reason, however, to assume that the net figure of $68,000,000 for the six principal roads is too high. In the first place, as already pointed out, the officials of the Steel Corporation were not only naturally likely to overestimate its property, but in the instance under consideration were under very strong temptation to do so. (See p. 182.) Furthermore, as noted below, there is rather strong evidence that Mr. Reed's estimate was chiefly based upon the book values of these roads, which in certain cases were undoubtedly excessive. The following table shows the capital stock, bonded debt, and surplus of the various railroad concerns owned by the Steel Corporation on June 30, 1901, figures for April 1 not being available, except in the case of the Pittsburg, Bessemer and Lake Erie:

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[1] It should be noted that a portion of the capital expenditures on transportation properties presumably were made on the steamship property of the Corporation. Since, however, no deduction will be made from the value of the steamship property on this account, the entire amount of $3,870,000 may properly be deducted from Mr. Reed's estimated investment in the railroad property.

TABLE 18.—OUTSTANDING CAPITALIZATION AND SURPLUS OF UNITED STATES STEEL CORPORATION'S RAILROAD CONCERNS, JUNE 30, 1901.

Company.	Capital stock issued.	Bonded debt outstanding.	Surplus.	Total stock, bonds, and surplus.
Duluth and Iron Range	$3,000,000	$11,232,000	$1,543,255	$15,775,255
Duluth, Missabe and Northern	2,512,000	8,323,000	3,595,511	14,430,511
Elgin, Joliet and Eastern	6,000,000	7,852,000	741,979	14,593,979
Chicago, Lake Shore and Eastern	650,000	3,230,000	897,642	4,777,642
Union Railroad	2,000,000	2,000,000	651,785	4,651,785
Pittsburg, Bessemer and Lake Erie[1]	12,000,000	14,134,160	[2] *996,499*	25,137,661
Youghiogheny Northern	400,000		10,134	410,134
Waukegan and Mississippi Valley	60,000		2,488	62,488
Newburg and South Shore	25,000		24.398	49,398
Elwood, Anderson and Lapelle	50,000		58,388	108,388
Lake Terminal	2,000,000			2,000,000
Johnstown and Stony Creek	91,500		4,756	96,256
Etna and Montrose	60,000		23,507	83,507
McKeesport Connecting	40,000		8,231	48,231
Northern Liberties	5,000		7,448	12,448
Pittsburg and Ohio Valley	60,000		14,030	74,030
Total	28,953,500	46,771,160	6,587,053	82,311,713
Allow for outside interest in Pittsburg, Bessemer and Lake Erie stock 48 per cent	5,760,000	6,784,397	[2] *478,320*	12,066,077
Net total	23,193,500	39,986,763	7,065,373	70,245,636

[1] March 31, 1901.

[2] Deficit.

From this table it appears that the railroad companies of the Steel Corporation had outstanding on June 30, 1901, $28,953,500 capital stock and $46,771,160 of bonds, and that their aggregate surplus accounts amounted to $6,587,053, making a grand total book value of $82,311,713. A deduction, however, should be made to allow for the fact that the Steel Corporation had only a 52 per cent interest, approximately, in the stock of the Pittsburg, Bessemer and Lake Erie Railroad. Making an adjustment in all three items on this account, the total book valuation of the railroad property of the Steel Corporation on June 30, 1901, would be, roughly, $70,250,000. As previously pointed out, this figure does not represent the equity of the Steel Corporation in these roads, but is rather a rough approximation of the total investment in them (except in the case of the Pittsburg, Bessemer and Lake Erie).

Since the current assets of the Steel Corporation are considered as a whole later, in this valuation of the railroad property such current assets should not be included. However, the gross current assets of these railroads on June 30, 1901, were almost exactly offset by the current liabilities, so that the valuations here given are virtually for the fixed property alone.

Taking the six roads specifically mentioned in Mr. Reed's affidavit (see p. 189) and including the total investment in the Pittsburg, Bessemer and Lake Erie to make the figures comparable, it will be seen that the total book valuation on June 30, 1901, was approximately $79,300,000, as compared with the total construction cost a year later, as given by Mr. Reed, $86,163,000. In view of the fact that by the time Mr. Reed's estimate was prepared, the surplus earnings of these roads had increased somewhat, it will be seen there is a very close correspondence between his figure of construction cost and these book valuations.

There can be little doubt that the valuations thus arrived at by the balance sheet express at least the full value of the tangible property of these railroads on June 30, 1901, and probably somewhat overstate that value. In the case of the two leading ore roads, the Duluth and Iron Range and the Duluth, Missabe and Northern, it is probable that the capitalization was not radically different from a fair valuation of the property. In this connection it may be noted that in 1907 the Minnesota State Railroad and Warehouse Commission engaged an engineer with a corps of assistants to make a valuation of the railroads in that State. The engineer submitted estimates both of the value of the physical property of the roads in the State on June 30, 1907, and also of the cost of reproducing them.[1]

Two sets of estimates were submitted, one allowing the average values of lands secured for rights of way, yards, and terminals, and the other allowing "multiples" of such values of lands used for these purposes, on the assumption that a railroad company ordinarily would have to pay considerably more than the normal value if sold to private purchasers. An additional allowance was made for the solidification and adaptation of roadbed, apparently on the theory that a railroad is ordinarily put in operation before the roadbed is really brought to a state of perfection.

These estimates for the Duluth and Iron Range and the Duluth, Missabe and Northern (including the "multiples" in question and the allowance for adaptation and solidification of roadbed) were, in round numbers, as follows:

Company.	Value of physical property June 30, 1907.	Cost of reproduction.
Duluth and Iron Range	$17,772,000	$20,565,000
Duluth, Missabe and Northern	20,909,000	23,088,000

It will be seen that both the estimated values as well as the estimated costs of reproduction here given are considerably in excess of the total indicated book valuations of these roads as given in Table 18, but when it is remembered that these book valuations were as of June 30, 1901, and that in the six-year interval up to June 30, 1907 (the date of the foregoing engineering estimates), there had been heavy expenditures, both on the roads and on the equipment, it would appear that these book valuations are a sufficiently liberal expression of the true value of these roads on the earlier date.[1]

In the case of the Elgin, Joliet and Eastern Railway Company, however, the book value apparently considerably overstated a fair valuation of the tangible property. It has been shown (see p. 123) that when the Elgin, Joliet and Eastern was taken over by the Federal Steel Company in 1898 that concern offered to buy the stock on the basis of only 87½ per cent of its par value, payable, moreover, in Federal Steel preferred stock and not in cash. (On deposit of $17.50 in cash, it is true, this Elgin, Joliet and Eastern stock received $87.50 per share in Federal Steel preferred and $70 per share in Federal Steel common.) It is entirely possible that in 1898 the $6,000,000 stock of the Elgin, Joliet and Eastern had no tangible property whatever back of it, and that there is good reason for the opinion that the stock in April, 1901, was only partly covered by tangible assets. The surplus earnings above fixed charges during the period from June 30, 1898, up to April, 1901, were only about $1,000,000.

The investment in the Pittsburg, Bessemer and Lake Erie Railroad also was almost certainly less than the par value of its securities. In fact, the balance sheet showed a substantial deficit on March 31, 1901. The highest price of the common stock in the Pittsburg market in 1900 was only about $30 per share, or 60 per cent of the par value ($50), and it sold in that year below $20 per share. While such market values, as repeatedly pointed out, can not be regarded as in themselves conclusive, still, considering also the fact that the balance sheet itself showed a deficit, there is good reason for assuming that the tangible assets of this road were less than the total outstanding securities.

On the other hand, the total book investment in the Union Railroad, given in Table 18, may somewhat understate a fair value of that property at that time. It will be recalled that Mr. Reed gave the total construction cost of this road at $8,000,000, his estimate, as already pointed out, being made in July, 1902. It seems reasonably certain, therefore, that if the book valuation in the case of the Union

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[1] It should be noted in this connection that these estimates of the cost of reproduction by the engineer employed by the Minnesota State Railroad and Warehouse Commission were considerably under similar estimates made by the railroads themselves a year earlier (June 30, 1906). Including the "multiples" and special allowances above noted in the State estimates, these estimated costs of reproduction compare as follows:

Company.	State estimate, 1907.	Railroad estimate, 1906.
Duluth and Iron Range	$20,565,000	$27,267,000
Duluth, Missabe and Northern	23,088,000	24,032,000

Railroad understates a fair valuation, the amount of that understatement can not be very great.

The miscellaneous smaller roads mentioned in Table 18 may be allowed their full book value without detailed consideration, except in the case of the Lake Terminal, the value of which is conceded to be not over one-half the $2,000,000 capital stock.

It is reasonably certain, therefore, that a fair valuation of the physical property of the Corporation's railroads as a group on April 1, 1901, would be somewhat less than the sum of their capital securities outstanding plus their surplus accounts.

It must be borne in mind that the United States Steel Corporation acquired these railroad properties as going concerns and did not base its price on any appraisal of the tangible assets. Moreover, these railroad properties were owned by companies having large interests in ore or in the steel business, and it is unlikely that any portion of the purchase price of these concerns was specifically allotted to the railroad property. Instead, the prices paid by the Steel Corporation were lump prices for the entire properties as going concerns, and presumably these prices were usually determined by considerations of earning power; in some cases they were probably determined by fear on the part of the organizers of the Steel Corporation of the competition of some of these concerns had they been left outside of the combination.

The reported net profits of these roads for the fiscal year ended June 30, 1900, after deducting interest and other fixed charges, were approximately $4,200,000, or, after deducting 48 per cent of the net earnings of the Pittsburg, Bessemer and Lake Erie, the net total would be approximately $4,080,600. This would be equivalent to about 17.6 per cent upon the $23,193,500 capital stock (again making a deduction on account of the Pittsburg, Bessemer and Lake Erie).

The corresponding earnings of these roads for the year ended June 30, 1901, again after fixed charges and interest were deducted, were approximately $3,650,000, or at the rate of 15.7 per cent on the capital stock.

From the standpoint of earning capacity, therefore, the value of its railroads in 1901 might well have been reckoned by the Steel Corporation at more than the par value of their outstanding securities plus accumulated surplus. From what has been said, however, there can be little doubt that a total of $70,000,000 is a sufficiently liberal estimate of the value of the tangible property alone of these railroads on April 1, 1901. It may be repeated that this is the valuation of the entire tangible property, and not merely the excess of such tangible property over bonded indebtedness.

Steamship properties.—The Steel Corporation at its organization acquired a fleet of 112 vessels with an aggregate of, roughly, 500,000 tons carrying capacity per trip; 69 of these were steamers and 43 were barges. The number of the vessels of the various constituent fleets, and their capacity for the season (based on 19 trips) as compiled from data published in the Iron and Steel Directory for 1901, were as follows:

Company.	Season's capacity.	Capacity per trip.	Per cent.	Vessels.	
				Steamers.	Barges.
	Tons.	*Tons.*			
Bessemer Steamship	4,343,400	228,600	45.8	25	31
Minnesota Steamship	2,052,000	108,000	21.6	12	10
Pittsburg Steamship	1,276,800	67,200	13.5	11	2
American Steamship	1,252,100	65,900	13.2	12	0
National Steel	564,300	29,700	5.9	9	0
Total	9,488,600	499,400	100.0	69	43

It is possible to get at a fairly close valuation for this steamship property. Thus, the Bessemer Steamship Company's fleet, which embraced 56 vessels (25 steamers and 31 barges), with an aggregate capacity of 4,343,400 tons for the season, was purchased for $8,500,000 in cash (payable on or before May 1, 1902). This fleet, it will be seen, represented nearly 46 per cent of the total capacity of the entire fleet of the Steel Corporation. If the remaining vessels had been purchased on the same basis, therefore, the total cost of the entire fleet would have been approximately $18,500,000. However, more than half the vessels of this Bessemer Steamship fleet were barges, which, of course, were less valuable than steamers.

The National Steel Company's fleet of 9 vessels, all steamers, originally cost that company in 1899 $1,511,800. This was an average of approximately $168,000 per steamer, or of $51 per ton based on the carrying capacity per trip. This price per ton is distinctly high, considering the fact that some of the vessels were not new. The explanation of this may have been that the purchase was made in the height of the iron and steel boom of 1899.

The fleet of the American Steamship Company (American Steel and Wire Company) included rather larger and more modern vessels. It will be recalled that the 12 steamers of this company, of which 7 were new, were valued in 1900 by the Inland-Lloyds at $3,035,000. This was at the rate of $46 per ton of capacity (per single trip).

The value of these three fleets is, therefore, rather definitely fixed at not much over $13,000,000. In the case of the Minnesota Steamship Company and the Pittsburg Steamship Company, no specific amount appears to have been allotted for the purchase of their vessels, which were acquired in conjunction with other properties. The book investment of the Minnesota company fleet in April, 1901, however, was $3,360,000 and that of the Pittsburg Steamship Company $3,783,000. Adding these amounts to the valuations of the other three fleets above stated gives a total of $20,189,000, as follows:

Bessemer Steamship Company	$8, 500, 000
National Steel Company	1, 511, 800
American Steamship Company	3, 035, 000
Minnesota Steamship Company	3, 360, 000
Pittsburg Steamship Company	3, 783, 000
Total	20, 189, 800

The valuation of the Minnesota Steamship Company's fleet appears to be rather high. It covered 12 steamers and 10 barges. Several of these, however, appear to have been built in the early nineties and were of comparatively small size and somewhat antiquated type and undoubtedly had suffered considerable depreciation. The book investment of the Pittsburg Steamship Company on the other hand appears to be fairly reasonable, as most of the vessels of this fleet were very large and of modern construction.

While it is probable that most of the valuations above given could with fairness be somewhat reduced, the total reduction would be comparatively small, and the Bureau has decided upon a valuation of $20,000,000 for the entire steamship property acquired by the Steel Corporation in 1901. There can be no question that this valuation is sufficiently high.

The calculations above given are substantially confirmed by computations based upon approximate average per-ton costs. A great many Lake ore vessels were constructed in the years 1899 and 1900. Statements in reliable trade journals indicated that such steamers, when new, cost all the way from about $250,000 to $350,000, or even $450,000 each. While, of course, there were considerable differences in cost for vessels of the same size and even of the same general description, roughly speaking it may be considered that $250,000 would at that time pay for the construction of a modern steamer of anywhere from 5,000 to 6,000 tons cargo capacity per trip, or, say, an average per-ton cost of from $40 to $50. Several steamers of an average capacity of about 7,500 tons appear to have been contracted for at a cost of $350,000 each, or an average of about $45 per ton, and vessels of 10,000 tons each were constructed at this time at from $400,000 to $460,000 each, or from $40 to $46 per ton. Estimates based on a rather large number of individual transactions indicate that an average allowance of about $45 per ton would be sufficiently liberal to represent the construction cost of new ore steamers of what at that time were of the most modern type. The average per-ton cost of barges would be less.

As the combined capacity per single trip of the entire fleet of the Corporation was almost exactly 500,000 tons, the valuation of $20,000,000 above arrived at is equivalent to $40 per ton. In view of the fact that new steamers of the most approved type could be constructed at that time at an average cost of about $45 per ton, an average of $40 per ton for the Steel Corporation's entire fleet in the condition in which it was acquired in April, 1901, is undoubtedly sufficient.

Dock properties.—The principal dock property of the Steel Corporation exclusive of those of the Duluth and Iron Range Railroad and the Duluth, Missabe and Northern Railway (which are included in the estimated valuations of those roads already discussed), and exclusive of receiving docks at Lake ports which have been included with manufacturing properties at those points, was that of the Pittsburg and Conneaut Dock Company, at Conneaut, Ohio. The book investment in this property in April, 1901, was $1,236,375. An allowance of $1,500,000 for this and for all the miscellaneous dock property of the Corporation on that date is undoubtedly sufficient.

Summary.—From the preceding discussion, therefore, it appears that the tangible property of the railroads of the Steel Corporation (including, in the case of the Pittsburg, Bessemer and Lake Erie, only a 52 per cent interest) can not be considered as having been worth on April 1, 1901, more than $70,000,000. The steamship property may be estimated at $20,000,000 and the miscellaneous dock property other than that included with the railroads at not more than $1,500,000. On this basis, the total indicated value of the entire group of transportation properties would have been $91,500,000.

In this estimate no deduction is made for bonded indebtedness. The Corporation's estimate of $80,000,000, given on page 182, allowed for a deduction of $40,340,000 for such indebtedness. Including this the Corporation's estimate of the value of these transportation properties as a group was $120,340,000, or $28,840,000 more than the valuation arrived at by the Bureau. As already stated, it is not so much the purpose of this discussion to criticise the Corporation's estimate as to arrive at a fair approximate valuation of these properties in 1901. In view of the fact, repeatedly pointed out, that the officials of the Corporation had every reason to exaggerate in their estimates and clearly did exaggerate in some of them, this excess of $28,840,000 in the Corporation's estimate (made in July, 1902) of these transportation properties over the values computed by the Bureau (as of April, 1901) is not remarkable.[1]

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[1] It is not quite clear whether the indebtedness of $40,340,000 referred to by Mr. Schwab in his estimate included about $10,000,000 of such bonds owned by the subsidiary companies themselves. If not, this further amount should be added to the Corporation's estimate of $80,000,000, for purposes of comparison.

Section 5. Investment in coke property.

In the estimate of the Corporation above referred to (see p. 182), the value of its coal and coke property was placed at $100,000,000. This estimate was evidently based upon a more detailed estimate submitted in an affidavit in the same suit in July, 1902, by Thomas Lynch, president of the H. C. Frick Coke Company. The essential features of this estimate by Mr. Lynch follow:

The coke properties of the subsidiary companies of the United States Steel Corporation, situate in Westmoreland and Fayette counties, Pennsylvania (Connellsville region), and in McDowell County, West Virginia (Pocahontas region), consist of 42,000 acres (Connellsville coal), which are of the present value of $1,500 per acre, representing an aggregate value of	$63,000,000
Separated from such Connellsville region is what is known as the "Lower Connellsville district," in which the companies own 15,000 acres, which is of the present value of $800 per acre, or in the aggregate	12,000,000
The companies own in Westmoreland and Fayette counties, Pennsylvania, 16,000 Beehive coke ovens, with the necessary equipment for operating the same, houses of employees, etc., of the aggregate value of	12,500,000
The companies own likewise transportation facilities, cars, water plants, etc., of the present value of	2,500,000
The companies also own a lease of 50,000 acres of Pocahontas coal lands in McDowell County, West Virginia, of the value of	2,500,000
The companies also own steam and gas coal in Allegheny, Washington, and Green counties, Pennsylvania, 22,550 acres, at $300 per acre	6,765,000
The companies also own scattered tracts of coal lands at or near mills and furnaces of the subsidiary companies in Ohio, Pennsylvania, Illinois, and West Virginia, 6,500 acres of the present value of $100 per acre	650,000
Total itemized valuations	99,915,000

It will be noted that Mr. Lynch estimated the value of the 42,000 acres of Connellsville coal land at $1,500 per acre. In his affidavit he said:

> The above valuations are figured on the prices now asked for similar coal lands in the several localities. In fact, the Connellsville properties could not be duplicated at any price, for the reason that there is less than 15,000 acres of unmined coal in the entire Connellsville basin outside of the holdings of the subsidiary companies of the United States Steel Corporation.

Comparatively few well authenticated transfer prices of coking-coal property prior to the organization of the Steel Corporation were made public. Several sales were reported at prices in the neighborhood of $1,000 per acre. Coal and Coke (a leading trade journal) in its issue of June 1, 1901, in criticising extremely high valuations placed upon the Steel Corporation's coke property by President

Schwab in certain testimony before the Industrial Commission, referred to the sale of a tract of nearly 200 acres at approximately $1,000 per acre, the coal being described as "excellent and of the strictly Connellsville seam." So far as is known, no transfer of any considerable tract of coal land in the Connellsville region had been made up to the middle of 1902 at so high a figure as $1,500 per acre. A sale of 12 acres in the heart of the Connellsville region was reported in Coal and Coke in July, 1901, at $1,750 per acre, for coal rights alone. This tract, however, was too small to afford any criterion of values generally. The Iron Age, at the close of November, 1901, referred to the sale of 200 acres of "choice coal lands in the Connellsville region" at $1,100 per acre as "the highest price ever paid for coking-coal lands." It had been reported in 1899 that the National Steel Company paid "about" $1,100 an acre for a tract of 717 acres of coking-coal property in the Connellsville district. This price, however, apparently included some coke-oven property.

In view of the fact that the great bulk of these Connellsville coal lands proper were owned by the Steel Corporation and of the further fact that the Corporation was not offering these lands for sale, it obviously was easy for the Corporation to set a price on such lands that could not readily be challenged from the standpoint of open-market prices. However, in view of the foregoing evidence, it is not reasonable to assume that the entire 42,000 acres of Connellsville coal land owned by the Steel Corporation was worth $1,500 per acre in 1902. Admitting that this property may have been worth as much as $1,200 an acre, which in the light of the preceding evidence appears to be a liberal valuation, the aggregate value would be, roughly, $50,000,000 instead of $63,000,000, as estimated by Mr. Lynch.

Similarly, the valuation of $800 per acre for the coal lands in the lower Connellsville region was distinctly above the average of reported transfer prices for such lands in the two years immediately preceding the organization of the Steel Corporation. In fact, for some time after the Steel Corporation was organized, sales of desirable coking-coal property in this region were made around $500 per acre. (See p. 285.) An average of $500 an acre for the 15,000 acres owned by the Steel Corporation in the lower Connellsville district would give a total valuation of $7,500,000, or $4,500,000 less than Mr. Lynch's figure.

It will be noted that Mr. Lynch's estimate included an allowance of $2,500,000 for the equity in the lease of certain Pocahontas coal lands. As this lease was not executed until the close of 1901, it should not be considered in this discussion of the Corporation's assets in April of that year.

The estimate of the coke-oven property and equipment by Mr. Lynch, namely, $12,500,000, undoubtedly was high, and in view of the fact, repeatedly pointed out, that there was an obvious inducement for all the officials of the Steel Corporation making such estimates to submit inflated valuations, there can be no doubt that all of his figures were liberal. With the exception of the coking-coal property, however, the valuations presented by Mr. Lynch may be accepted in this rough comparison.

Using the averages of $1,200 per acre for the Connellsville coal property and $500 per acre for the lower Connellsville coal property, respectively, in place of his valuation of $1,500 per acre and $800 per acre, respectively, and excluding the Pocahontas lease, the grand total of his estimate would be reduced to about $80,000,000. However, during the period from April, 1901, to the date of Mr. Lynch's estimate, the Steel Corporation had made capital additions of rather more than $2,000,000 to its coal and coke property. This further sum, therefore, should be deducted in arriving at an estimate of the investment in such property at the earlier date.

Taking all these facts into consideration, it would seem that there can be little question that a fair valuation for these coke properties on April 1, 1901, would be rather less than $80,000,000. Again, however, in order to give the Corporation the benefit of possible doubt, the Bureau has placed its valuation of these properties in April, 1901, at that figure. Even this value, however, it should be clearly kept in mind, must be attributed in considerable measure to the great concentration of ownership which had taken place in such coking-coal lands prior to their acquisition by the United States Steel Corporation.

Section 6. Value of natural-gas and limestone properties.

Natural-gas properties.—The value of property like a natural-gas field, the extent and life of which can not be determined, even approximately, by engineering science, must necessarily be largely a matter of conjecture. There is good reason to suppose that the valuation of $20,000,000 placed on this property by the Steel Corporation in its estimate (see p. 182) is, like the estimates of the values of the other natural resources, decidedly excessive. Moreover (see p. 316), the Steel Corporation, as late as January 1, 1908, claimed a valuation of only $10,360,940 for its natural-gas property. It had acquired considerable such property since April 1, 1901. On the other hand, of course, it had exhausted a considerable amount of its reserve supply of natural gas. While, therefore, it is highly improbable that the market value of this natural-gas property was equal to the $20,000,000 valuation placed upon it in the 1902 estimate, owing to the complete absence of a satisfactory basis for estimating its value, the Bureau has allowed that estimate to stand.

Limestone properties.—The valuation of $4,000,000 placed on the limestone properties of the Steel Corporation, whether excessive or not, is so small as compared with the capitalization of the Steel Corporation that it may be accepted without discussion as the value on April 1, 1901.

Section 7. Current assets of the Corporation.

By reference to Table 16, on page 182, it will be seen that the Corporation reported its current assets on June 1, 1902, at $148,291,000. This was the amount after deducting from the gross current assets all ordinary current liabilities, and likewise certain purchase-money obligations, as will be seen from the following excerpt from the affidavit submitted in behalf of the Corporation by President Schwab:

> The cash and cash assets of the Steel Corporation and subsidiary companies on June 1, 1902, amounted to the sum of $214,278,000, as against which there stood the usual current liabilities and accounts and bills payable and certain mortgages and purchase-money obligations, amounting to $65,987,000, leaving the aggregate net cash assets as of that date $148,291,000, and such aggregate net cash assets have increased more than $12,000,000 since June 1, 1902.

This total of $148,291,000, as stated, was the amount of such current assets on June 1, 1902. The net current assets on April 1, 1901, according to a condensed balance sheet submitted to the Bureau by the Steel Corporation (see Exhibit 6) were about $136,500,000. This figure includes the $25,003,000 cash capital provided the Corporation at its organization. It allows for sundry adjustments in the balance sheets of the subsidiary companies made just after the consolidation was effected, such adjustments, however, not being of especial interest in this connection.

The Bureau, in arriving at this figure of $136,500,000 as the net current assets in April, 1901, has treated the purchase-money obligations and sundry real-estate mortgages of the subsidiary companies, aggregating $21,872,000, as similar in character to bonded indebtedness and not like current liabilities, and therefore it did not deduct them from the gross current assets. The reason for this is that such purchase-money obligations ordinarily ran for a year or several years, and, what is more important, were usually issued against fixed property and not liquid assets. Thus, in the case of the Bessemer Steamship Company, the purchase price of $8,500,000 was first provided for by purchase-money obligations which were not entirely liquidated in cash for nearly two years after the company was acquired.[1] Prior to such liquidation, the fixed property account of the

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[1] Notes representing $4,250,000, or one-half the purchase price, were liquidated in November, 1902. The remainder were paid off later.

Steel Corporation was, of course, increased by the value of this steamship property without a corresponding diminution of its working capital.

The amount of such purchase-money obligations and mortgages deducted from current assets by the Corporation in 1902 was $16,367,000.

Section 8. Summary of value of tangible property acquired by the Steel Corporation in 1901, other than ore.

The preceding valuations of the Bureau for the different classes of property acquired by the Steel Corporation in 1901, with the exception of ore, may now be summarized as follows:

Manufacturing, including blast furnaces	$250, 000, 000
Transportation	91, 500, 000
Coal and coke	80, 000, 000
Natural gas	20, 000, 000
Limestone	4, 000, 000
Working assets	136, 500, 000
Total	582, 000, 000

The Bureau's estimate of the total value of the tangible property of the Steel Corporation at its organization in April, 1901, *exclusive of ore*, is therefore $582,000,000. The Corporation's valuation for these properties (see Table 16, p. 182), on the other hand, aggregates $700,291,000, or, after adding $40,340,000 indebtedness of transportation companies, and $16,369,000 purchase-money obligations, to make the two sets of figures fairly comparable, the Corporation's total for these classes of property would be $757,000,000. The Bureau's valuation for these properties is thus $175,000,000 less than the valuation as submitted by the Corporation in the Hodge suit in July, 1902. During the interval in question considerable additions had been made to these classes of property by the Corporation, and the discrepancies between the two estimates for these two items are somewhat less than would at first sight appear. The most important difference occurs in the case of the manufacturing properties, for which the Corporation's estimate is $348,000,000, while the Bureau computed the value at $250,000,000. The difference in the two estimates is chiefly due to the excessive valuation by the Corporation. The Corporation's estimate of $348,000,000 for these properties is completely discredited by the fact, already noted, that at the end of 1907, or about five and one-half years later, it valued its manufacturing properties at only $367,600,000, although during this period net capital additions of $114,500,000 had been made to these manufacturing plants, this after ample depreciation had been allowed.

By reference to Table 16, page 182, it will be seen that the Corporation's estimate of the value of its ore property in July, 1902, was no less than $700,000,000, or practically one-half of the grand total valuation of all its tangible assets. In view of the much smaller disparities between the Bureau's valuations and the Corporation's valuations for most of the other classes of property, it is apparent that estimates of the value of the entire tangible assets of the Corporation in April, 1901, must largely depend upon the valuation assigned the ore. On account of the extraordinary value claimed for this ore property by the Steel Corporation, the Bureau has taken up a valuation of this ore by several different methods in the following pages of this chapter.

II. VALUE OF THE STEEL CORPORATION'S ORE PROPERTY IN 1901.

Section 9. Estimated tonnage of Corporation's ore holdings in 1901.

The Bureau has estimated the value of the ore property of the Corporation in 1901 by three different methods—first, on the basis of prices paid for ore in fee about the time the Corporation was organized; second, on the basis of the price paid by the Steel Corporation itself for a large portion of its ore property; and, third, by a calculation of the "present worth" of royalties on leased ore. These various methods are fully explained later.

The first step in calculating the value of the Corporation's ore in 1901 is to get an approximate idea of the quantity. Conclusions must be based largely upon estimates made about the time the Corporation was organized. It is true that estimates of the total quantity of ores embraced in the properties then acquired have since been largely increased, partly as a result of subsequent exploration and partly because of the inclusion of lower grades of ore than were then taken account of. Obviously, however, for the purpose of determining the value in 1901, it would be incorrect to include additional tonnages which have been developed in these ways, because these can not be regarded as having influenced estimates current at that time. It is true that both the purchaser and the seller of a great iron-ore deposit may be influenced by the possibility that the total tonnage will prove considerably greater than either of them are reckoning on at the time of the sale, but there is likewise the possibility that their estimates will prove excessive. These contingencies, however, would affect the price, and are thus taken account of in the present discussion of the value of this ore property.

It is necessary, therefore, to base ideas as to the quantity of the ore reserves of the Steel Corporation in 1901 upon estimates current at the time. One such estimate was that of C. M. Schwab, president of the Corporation, before the Industrial Commission, in May, 1901, when he stated that the company had "over" 500,000,000 tons of ore "in sight" in the Lake region.

In July, 1902, as shown on page 182, Mr. Schwab and other officials of the Steel Corporation estimated the value of the Corporation's ore property at $700,000,000. This estimate was admittedly at the rate of "$1 per ton" on a total estimated tonnage of 700,000,000 tons.[1]

In view of the fact that during the period from the organization of the company up to July, 1902, several large parcels of ore property had been acquired, adding substantially to the total tonnage, this estimate of 700,000,000 tons made by Mr. Schwab in 1902 agrees very well with his estimate of "over" 500,000,000 tons made to the Industrial Commission in the preceding year.

In May, 1901, in a statement submitted to the New York Stock Exchange by the United States Steel Corporation, the ore tonnage of the Lake Superior Consolidated Iron Mines (which owned the most important ore property acquired by the Steel Corporation at its organization) in known or practically explored properties was estimated at from 300,000,000 to 400,000,000 tons, this estimate not including some minor parcels and a considerable acreage of unexplored lands believed to contain ore. This estimate later proved to be a conservative one.

A careful schedule by the Minnesota Tax Commission, made in 1907, or six years after the Corporation was organized, placed the aggregate tonnage of all iron-mining companies in that State at slightly less than 1,200,000,000 tons, and credited the Oliver Iron Mining Company (under whose management all of the ore properties of the Steel Corporation in Minnesota had then been placed) with approximately 913,000,000 tons. These estimates, while apparently made on a conservative basis, included a large acreage of "tonnage prospects;" that is, mining lands which had not been actively operated or developed, but which were believed to contain ore. Of this total of, roughly, 1,200,000,000 tons, about 250,000,000 tons were credited to unexplored lands which had not even been "prospected," but which were near good mining properties. This total, as just stated, was compiled in the year 1907, and the figure given for the United States Steel Corporation (Oliver Iron Mining Company) of 913,000,000 tons included a large tonnage acquired since the Corporation had been organized. Thus, during this interval, the Corporation had acquired the Chemung properties, with an estimated reserve of many millions of tons; the Union-Sharon properties; and, much more important still, a large tonnage by lease from the Great Northern Railway Company.

This total compiled by the Minnesota Tax Commision did not, of course, include the holdings of the Corporation on the older ranges in Michigan and Wisconsin. However, according to the records of the Corporation, by far the greater part (over 85 per cent, not including the Great Northern ore) of its Lake ore reserves in 1907 were in Minnesota, and chiefly on the Mesabi Range.

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[1] In this estimate no distinction appears to have been made between the value of fee and leasehold properties. (See p. 206.)

In view of the foregoing evidence and of the fact that as late as the middle of 1902 officials of the Steel Corporation themselves reckoned on a tonnage of 700,000,000 tons, any estimate above this figure for the Corporation's ore holdings on April 1, 1901, must obviously be rejected. A somewhat lower estimate might, indeed, be justified, but it has been deemed better to use this figure.

PROPORTIONS OF FEE AND LEASED ORE.—Much of the ore property of the Steel Corporation was merely leased and not owned in fee. The value of the fee of an ore deposit (where the ore is not subject to lease or to other incumbrance) is, of course, the price at which such fee could be sold, and in such case that price would represent the total value of the ore in the ground. In the case of a mining lease, however, the lessee simply secures the right to mine the ore as it lies in the ground, on payment of a certain sum per ton for the ore as he mines and ships it, this charge being known as a "royalty;" the rates of royalty vary more or less with particular conditions, such as the location of the mine, and more especially with the quality of the ore. It should be clearly understood that the value of such a leasehold can not be measured by the royalty, but instead is the price at which this mere right to mine the ore can be sold or transferred to another party. In some cases such leaseholds do not have any transfer value whatever. This is shown by the fact that such leases are sometimes renewed at lower rates of royalty than those originally stipulated. On the other hand, many leases have been transferred at a premium, or, as it is termed, a "bonus," over and above the stipulated rate of royalty. Frequently such bonus payments are intended to cover improvements to mining property. In so far as they are paid on account of the ore alone as distinct from improvements, such bonus payments may be regarded as measuring the value of the mining privilege itself, at the stipulated rate of royalty.

In other cases, instead of a cash bonus, such leases are transferred on payment of an additional or increased royalty. (See p. 216.)

It will be seen, therefore, that the idea frequently encountered, that the royalty paid by the lessee indicates the value of his leasehold interest in the ore, is entirely erroneous; such royalties as are actually paid out are a part of the operating cost, like the payments made for labor, materials, etc. The royalty thus being an operating cost, it is obvious that so far as unmined ore in the ground is concerned such a cost can in no sense be regarded as involving an investment. This royalty charge, in fact, becomes a part of the investment only as other cost items do, namely, to the limited extent to which it may enter into ore which has actually been extracted and carried in inventories at a given time.

This matter of ore leases is discussed in more detail in sections 12 and 13.

As will be shown in detail (see pp. 229–231), the value per ton in 1901 of ore held in fee was much greater than the value per ton of leasehold interests. The fact that a large proportion of the Steel Corporation's holdings of ore in 1901 was merely leased has, therefore, an important bearing upon the aggregate value of those holdings. The exact proportions of the tonnages of fee ore and of leased ore to the total estimated deposit of 700,000,000 tons in 1901 can not be stated, but apparently considerably less than one-half the entire quantity was owned in fee. A study of estimated tonnages of some of the more important mines of the Corporation in 1904 indicates that not over one-third of the total holdings at that time was owned in fee. Moreover, it is known that this was about the proportion at a somewhat later date. Since, however, exact data are not available for 1901, the Bureau, in order to avoid possible undervaluation in its calculations, has assumed that one-half the total holdings, or 350,000,000 tons, was owned in fee.

Having thus determined the total tonnage of the ore holdings of the Corporation in 1901, the discussion of the value of this ore property by the three methods outlined on page 203 will be taken up and in the order there shown.

Section 10. Value of Steel Corporation's fee ore property as indicated by prices paid for ore mines in fee by constituent companies in 1899 and 1900.

Nearly all of the Steel Corporation's original ore property was purchased in connection with the other property of the constituent concerns through acquisition of their stocks, and apparently no specific portion of the purchase price was allotted to it. The prices paid for this ore property by the constituent concerns themselves are known in only a few cases. However, with respect to purchases of fee ore (which is the subject of the immediate discussion) made in the early or middle nineties, the figures of original cost, even if available, would be of very little service in preparing an estimate of the value of the same properties in April, 1901. It is obvious that the price originally paid for a mining property in fee does not necessarily or even probably have any close correspondence to the subsequent value after exploration and development. While as a rule the extent and therefore the value of iron-ore deposits can be more accurately determined than that of many other minerals, nevertheless there have been repeated instances where iron-mining properties in the Lake Superior region originally purchased for very small considerations have later sold for great sums. On the other hand, mines for which considerable sums were paid have been abandoned after exploration. It is apparent, therefore, that the value of the fee ore of the Steel Corporation in 1901 can not be satisfactorily determined by a study of the original cost of such ore to its constituent concerns, especially where those concerns acquired the ore several years prior to that date.

The prices paid in 1899 and 1900 by the constituent companies of the Steel Corporation, however, are entitled to consideration. It is true that such prices may have been either very much in excess or very greatly below the value of these properties as determined by subsequent exploration and development, but at any rate the prices paid by these large interests in 1899 and 1900, when competition for ore property by steel concerns was exceedingly keen, must be regarded as a full expression of the valuation placed upon them at that time, and they thus afford some idea of the value of ore in the ground generally. For this reason it is desirable to examine the prices named in a few such fee transfers of important iron-mining properties in 1899 and 1900.

The American Steel and Wire Company purchased a number of mines in 1899 and 1900. The most important of these was the Sauntry, which was secured in fee for $700,000 in cash. This mine contained a very large tonnage of ore, currently estimated at fully 25,000,000 tons. The Steel and Wire company, in fact, in an official statement to the New York Stock Exchange in August, 1899, stated that the mine "measured up between 45,000,000 and 50,000,000 tons of ore," and that the company had estimates running as high as 80,000,000 tons. Again, before the Industrial Commission in November, 1899, John W. Gates, chairman of the Steel and Wire concern, said of this purchase:

> We bought one tract this spring; we paid $700,000 for it; we had the ore measured up in that tract, and it measures, according to the figures of one of the best experts in this country, 83,000,000 tons of ore. I suppose that ore would sell to-day for two or three million dollars.

While only a small portion of this ore was Bessemer, the mine was a very desirable one. The iron content was fairly high at about 58 per cent for dried ore. It will be seen that on the basis of the original estimate of 25,000,000 tons the average cost per ton would be less than 3 cents. Furthermore, it is important to note that Mr. Gates, although testifying (evidently in optimistic vein) during one of the most extraordinary booms ever known in the iron and steel industry, placed the value of this ore body, after the tonnage had been estimated by an expert at 83,000,000 tons, at not over $3,000,000, or at less than 4 cents per ton.

In 1899 the Oliver Iron Mining Company purchased the Security Land and Exploration Company for $300,000. This company owned the Sparta, Genoa, and Towanda mines, as well as considerable other mining land. A portion of the property was leased, but it was currently estimated in trade journals that the Oliver Iron Mining Company in this purchase acquired not less than 6,000,000 tons of ore in fee, and possibly twice that amount, aside from the leasehold interests on additional tonnage. Leaving out of consideration the leased ore, on which, of course, a royalty would have to be paid, and accepting the lower estimate of the tonnage owned in fee, this purchase price would still amount to only 5 cents per ton, this, moreover, including some improvements.

In 1900 the Sharon Steel Company purchased in fee the Sharon mine, in Minnesota, for $150,000. This mine contained a large tonnage of high-grade ore.

This Sharon transaction undoubtedly was an exceptionally fortunate one for the buyers. However, prices paid for many mines transferred in fee at this time were equivalent on the tonnage as then estimated to only a few cents per ton.

In this connection the following excerpt from a brief filed against a tonnage-tax bill in the house of representatives of the Minnesota legislature in 1909 by the delegation from St. Louis County (a large number of the mines of the Mesabi Range being in this county) may be noted:

> The cheapest sales of fee ore we ever knew were for less than 1 cent per ton. The highest that we ever knew were for 15 cents per ton. There may have been sales at a higher price, *but we have never known of one, and upon inquiry can learn of none.*[1]

This positive and deliberate statement, coming from a delegation of men representing the richest iron-ore mining section of the country, is certainly entitled to much consideration, even though it may not be an exact indication of maximum ore values. Furthermore, this statement was made in 1909, or eight years after the organization of the Steel Corporation, during which interval there had been a considerable appreciation in values of ore property.

In view of this emphatic statement, and in view of the preceding evidence that large deposits of ore were purchased in fee as late as 1899 and 1900 for a few cents per ton, there can be little doubt that an estimate of 15 cents per ton as the average value of even the fee ore of the United States Steel Corporation at its organization would be excessive. At 15 cents per ton the estimated 700,000,000 tons of ore controlled by the Steel Corporation (including fee property and leaseholds) would have been worth $105,000,000 to the fee owners, and, of course, less than this for the interest of the Steel Corporation therein, because it owned only a part of this tonnage in fee. In the same way, at an average valuation of 10 cents per ton, the value of this ore body to the fee owners would have been $70,000,000, and at 5 cents a ton $35,000,000.

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[1] Italics by Bureau. It is possible that this statement had reference to Minnesota ore properties only and did not apply to the old range ores of Michigan, but since the great bulk of the Corporation's ore was in Minnesota this is not an important matter.

These estimates do not allow for improvements to mining properties; that is, for the investment in opening up the mines (such as stripping the overburden; the construction of shafts, galleries, etc.), and in mining structures and equipment. The total book investment of the Steel Corporation's subsidiary companies in such improvements in April, 1901, was about $9,000,000. Taking the value of the ore in the ground at an average of 5 cents per ton, the total value of the ore property to the fee owners in 1901, including this investment in improvements, would have been about $44,000,000. Allowing 10 cents per ton for the ore and again adding the improvements, the total value would have been about $79,000,000.

These calculations, as just stated, however, do not indicate the value of this ore property to the Steel Corporation for the reason that only a portion of its holdings were owned in fee, that portion having been estimated at only one-half the total. It is unnecessary to complete the present computation by making an adjustment on account of leasehold properties, because the second and third methods of valuation of the entire property presented in the following sections afford a much more satisfactory basis for arriving at definite conclusions. But it should be clearly understood that the value of the Corporation's interest in this ore would be considerably reduced if allowance were made for the fact that much of its ore was simply leased. (See note, p. 231.) It is, however, worth noting that even if the Steel Corporation had owned the entire 700,000,000 tons of its ore in fee the total value at the extreme figure reported by well-informed mining interests as late as 1909—15 cents per ton—and including improvements, would have been only $114,000,000.

Section 11. Value of Steel Corporation's ore property as indicated by prices paid by the Corporation for certain parcels of its ore.

The second method of determining the value of the Steel Corporation's ore holdings is based upon the prices paid by the Corporation itself for some of its principal ore properties. As already pointed out, most of the ore property acquired by the Steel Corporation at or about the time of its organization was not bought separately, but was included with other property acquired by the purchase of capital stocks of the constituent concerns. In most such purchases there apparently was no appraisal of the different classes of property, and no allotment of any specific part of the purchase price to cover the ore. In some cases, however, it is possible to determine approximately the portion of the purchase price which may fairly be considered as paid for the ore property by itself.

In making any such study of indicated prices for ore property which the Steel Corporation paid for in its own securities, it is imperative to bear in mind that the valuations thus arrived at are almost certain to be excessive. The analysis of property valuations given in Chapter II clearly indicates that the Steel Corporation issued its securities at a rate far in excess of the market value of the tangible property acquired, and that this was also almost invariably true of the constituent concerns themselves. In the case of most of the constituent concerns the evidence indicates that the par value of the preferred stock alone represented the full value of the property acquired. However, in most cases the market value of the preferred and common stock taken together (even though the common stock frequently sold at only a small fraction of the par value) was usually considerably in excess of the par value of the preferred alone. In other words, the mere combining of such properties imparted a value to them collectively which exceeded their aggregate value operating separately and in competition with one another. This increase in valuation merely as a result of consolidation, while partly due to economies effected thereby, must in a measure be regarded as the result of monopolistic or concentrated control. Similarly, the market value of the Steel Corporation's securities was from the start very greatly in excess of the combined market valuation of the securities of the constituent companies. (See p. 242.) This is chiefly because merger and monopolistic values were created by the formation of the Steel Corporation which were reflected in the market value of the securities issued for the properties acquired. Therefore, the price paid by the Steel Corporation in its own securities, even when reduced to the basis of market value, exaggerates the real value (apart from merger value) of the property acquired thereby. A study of values by this method is nevertheless of service, since the resulting valuation arrived at must be regarded as fixing a maximum figure for this portion of the ore property.

Purchase of Lake Superior Consolidated Iron Mines.—A calculation of the value of the Corporation's ore property may be made in the case of the Lake Superior Consolidated Iron Mines, which, as already shown, had enormous ore holdings in the Lake region, aside from an extremely valuable ore railroad. Its ore holdings were officially stated in 1901 (see p. 204) at from 300,000,000 to upward of 400,000,000 tons, and probably constituted two-fifths of the total of the Steel Corporation at that time, and perhaps more.[1] Furthermore, many of the mines of the Lake Superior Consolidated concern were exceptionally well located and contained ore of very high grade. The quality of the ore properties of this company as a whole was certainly equal to the average quality of all the ore properties acquired by the Steel Corporation, while the proportion of the fee ore apparently was higher than for the other ore property of the Corporation. By determining a valuation for so large a fraction of the total, therefore, it is possible to arrive at an approximate valuation, or at least a maximum valuation, of the entire holdings of the Corporation.

As shown in Table 4, on page 113, the United States Steel Corporation issued, roughly, $39,700,000 of its preferred stock (par value) and a like amount of its common stock, or a total of $79,400,000 (par value) for $29,413,905 of the stock of the Lake Superior Consolidated Iron Mines. The average price of the preferred stock of the Steel Corporation during the first year of its existence was 94 and the average price of the common 44. On this basis the amounts of United States Steel stock issued for the Lake Superior Consolidated property would have been worth approximately $55,000,000. While this was substantially the amount obtainable by the vendors, it undoubtedly far exceeded any price which the purchasers would have been willing to pay in actual cash. Moreover, as just shown, such prices in securities, even when reduced to the basis of actual market value, undoubtedly include what was in effect a premium paid to get greater control of the ore situation, and thus exaggerate a fair market valuation of the property if sold under ordinary competitive conditions.

If the property of the Lake Superior Consolidated Iron Mines had consisted exclusively of ore, this figure of $55,000,000 would, of course, represent the cash equivalent amount received therefor. However, in addition to its ore the Lake Superior Consolidated Iron Mines owned $2,512,500 capital stock and $2,305,000 bonds of the Duluth, Missabe and Northern Railway, or a total, par value, of $4,817,500. As pointed out in the analysis of this railroad property (p. 192), there is reason to assume that these securities were substantially covered by tangible value alone, while the high earning power of the road undoubtedly gave the stock a value well in excess of the value of the tangible assets back of it. Its average earnings in 1900 and 1901 were at the rate of over 50 per cent on its capital stock. Furthermore, this railroad, on June 30, 1901, reported a surplus of $3,595,500. The surplus of the road on April 1, 1901, when the Steel Corporation was organized, has been assumed at

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[1] It may be pointed out that a computation by the Corporation in 1908 placed the total amount of ore of the Lake Superior Consolidated Iron Mines on April 1, 1901, at about 487,000,000 tons. Since, however, this estimate was prepared by working backward from the estimated reserve in 1908, the Bureau has used the lower estimates previously made.

$3,000,000 as undoubtedly a conservative figure. The further fact should be noted that this railroad company had long-term contracts for the transportation of the ore taken from the Lake Superior Consolidated company's mines. The ore rate on this road was so high as to insure a liberal profit on its transportation. Furthermore, it was altogether probable that the volume of the ore business would increase in the future with the expansion of the iron and steel industry.

It can not reasonably be doubted that the Steel Corporation, in fixing a price on the Lake Superior Consolidated Iron Mines as a whole, was influenced by the great earning power, present and prospective, of this railroad property and the great advantage of controlling it. In order, however, not to underestimate the value of the ore, the value of the railroad property will be assumed at only the par of the securities owned by the Lake Superior Consolidated Iron Mines plus $3,000,000, for surplus, or a total of $7,817,500.

Since it is obviously impossible to say how much the purchasers of the Lake Superior Consolidated Iron Mines would have been willing to pay for the railroad alone and how much for the ore property, it has been assumed that that portion of the Lake Superior Consolidated Iron Mines stock which may be considered as representing its investment in the railroad property was this amount of $7,817,500 and that this railroad property and the ore property received the same terms, viz, $135 in United States Steel preferred and $135 in United States Steel common stock for each $100 par value of Lake Superior Consolidated stock. This assumption is reasonable in view of the enormous earning power of the road and the greatly increased control of the ore situation which would result to the Steel Corporation from its acquisition. Since the par value of the railroad securities owned by the Lake Superior Consolidated Iron Mines, namely, $4,817,500 plus $3,000,000 for surplus, amounted to $7,817,500, the total stock of the Steel Corporation which may be regarded as issued for this railroad property would have been 135 per cent of this amount in common and in preferred, or $10,553,625, par value, of each class. The Steel Corporation issued in all $39,708,771 of each class of its stock to acquire $29,413,905 stock of the Lake Superior Consolidated Iron Mines (this being the entire issue then outstanding except $10,689). It follows on the above assumption, therefore, that the amount issued for the ore property alone may be considered as the difference between this total amount and the amount issued for the railroad property, or $29,155,146 of each class.

At the average prices of the stocks of the Steel Corporation during the first year after its organization (94 for the preferred and 44 for the common), the preferred stock here assumed to have been issued for the ore property would have been worth $27,405,837, and the common stock $12,828,264, a total of $40,234,101. This total may be considered as substantially the amount obtained (or obtainable if they sold their United States Steel stock) by holders of the Lake Superior Consolidated Iron Mines stock for their ore property. It should be repeated that this valuation must be considered as a maximum limit and probably distinctly excessive. As just shown, each $100 par value of the stock of the Lake Superior Consolidated concern received $135 in United States Steel preferred, and $135 in common stock, a total of $270 at par, the market value of which was $186 (based on the average prices for a year), whereas during the late nineties the stock of the Lake Superior Consolidated company had frequently sold at very much below par and apparently had not sold above $75 per share up to the close of 1900. It should be taken into account that the scattered transactions in the stock in 1900 (particularly in view of the fact that the company had neither paid dividends nor published annual reports) may not have fairly represented its real value. It is incredible, however, that the great increase in price represented by the terms on which the stock was purchased by the Steel Corporation can be explained on the ground that the value of the property had not previously been recognized. Instead, a large part of this great increase in market valuation must be attributed to the fact that the vendors were in a position to dictate their own terms and that the purchasers were willing to pay an excessive price because of the control of ore and transportation thereby secured.

The average prices per ton for ore indicated by this total price of $40,234,000 for the Lake Superior Consolidated ore property are as follows:

Indicated amount received for ore property of Lake Superior Consolidated Iron Mines (leaseholds, fee mines, and improvements)		$40, 234, 000
On basis of 300,000,000 tons this equals	cents per ton	13. 4
On basis of 400,000,000 tons this equals	do	10. 0

These indicated prices per ton are not simply the prices of ore and leaseholds alone, since the total price on which these computations are based included improvements to mining property as well. It should be kept in mind that the proportion of fee holdings of the Lake Superor Consolidated concern to its total ore property appears to have been larger than that for the entire ore property of the Steel Corporation, so that for this reason also results obtained from the use of these figures for this particular purchase are rather too liberal to the value of the Corporation's investment in ore. Thus almost the entire ore holdings of the Carnegie interests were in the form of leases and not owned in fee.

Taking the average value per ton indicated above by using the minimum estimate of tonnage (300,000,000 tons)—that is, the average of 13.4 cents per ton—the indicated value of the entire ore property of the Corporation (700,000,000 tons), if purchased on the same terms, would have been approximately $94,000,000, this including fee properties, leaseholds, and improvements. On the basis of 10 cents per ton (indicated by the use of an estimate of 400,000,000 tons for the Lake Superior Consolidated ore holdings), the indicated value of the entire property would have been only $70,000,000.

It should be repeated that the valuations of the entire ore property of the Corporation in 1901 arrived at by this method probably exaggerate a fair valuation at that time; since they are based upon a price paid for a portion of the total, which has been shown, for several reasons, to have been excessive.

Purchase of Union-Sharon ore properties.—Some further light upon the value of ore in the ground is furnished by the terms on which the United States Steel Corporation acquired the properties of the Union and Sharon steel companies. These concerns were purchased in the latter part of 1902, payment being made through the guarantee of bonds issued against these properties. The total ore tonnage acquired in this transaction was officially estimated in the annual report of the Steel Corporation for 1902 at "approximately 40,000,000 tons." This substantially agrees with estimates by trade authorities which placed the ore reserves of the Sharon Steel Company at about 21,000,000 tons and those of the Union Steel Company at about 20,000,000 tons.

For the Sharon mining property the Steel Corporation paid, according to its own figures, $4,400,000. This mine was acquired in fee, so that based upon an estimate of 20,000,000 tons, the average cost to the Steel Corporation was 22 cents per ton.

For the Union Steel Company's ore properties, which included the Penobscot mine, owned in fee, and the Donora and Sweeney mines, which were merely leased, the Steel Corporation paid $4,150,567. On the basis of say 20,000,000 tons, the average cost per ton—treating fee and leased ore as a unit—would be about 20½ cents. Had it all been acquired in fee, it is fair to assume that the total cost would have been somewhat greater than the figure above given, which represents the price paid for that portion of the ore bought in fee plus what was practically only a bonus for the right to mine ore from the other mines at a royalty.

The above prices included payment for some construction work and mining improvements.

These prices are considerably above the average prices indicated in the preceding discussion. However, the price paid for these ore properties admittedly represented a substantial profit to the vendors. President Schwab, of the Steel Corporation, in the annual report for 1902, said of this Union-Sharon purchase that the acquisition was effected "on the basis of actual cost of the properties to the vendors, except as to certain ore and coal property and other lands, and as to them on a basis not exceeding actual present value."

In another official statement Chairman Gary stated that the profit of the vendors in the transaction arose solely from their profit in operating their plants to the date of purchase and in the increased value of their ore, coal, and real estate which had been purchased some time previously.

In the case of the Sharon Steel Company, this profit was an exceedingly liberal one. Its Sharon mine, as previously stated, originally cost (in 1900) only about $150,000. This sum covered the entire ore tonnage of the Sharon concern, so that after allowing for the moderate expenditure for improvements to the mine, the profit on this sale apparently was in the neighborhood of $4,000,000. Of course, the mine at the time it was purchased by the Steel Corporation was worth very much more than the Sharon Steel Company had originally paid for it, since the extent of the deposit proved to be far in excess of the original expectations.

A further point to emphasize in all this discussion, however, is that the liberal price for this Sharon property was paid more than eighteen months after the organization of the United States Steel Corporation, during which interval the value of iron ore lands had enhanced, partly, no doubt, because of the obvious policy of the Corporation and of other large steel concerns to extend their holdings of ore property. Despite these conditions, the price paid for the Sharon mine figures out only about 22 cents per ton.

A still more important matter is that the price paid for the Union-Sharon properties as a whole was influenced by the fact that the Steel Corporation by this purchase removed what threatened to be a troublesome and powerful competitor from the field. As shown later, the interests back of the Union-Sharon concern—among whom was H. C. Frick—were very strong and aggressive. Since the manufacturing properties of the Union and Sharon steel companies were admittedly paid for only on a cost basis, it follows that any payment thus made with a view to removing competition really went into the price paid for ore property and other natural resources; most of it went against the ore. (See p. 283.) Therefore, the price nominally paid for the ore was in reality paid both for the ore and the elimination of competition, and can not properly be calculated as for the ore alone. The fact that in the face of all these conditions the price paid for the fee of this Sharon mine at the close of 1902 was only about 22 cents per ton indicates that the valuation of 13.4 cents per ton indicated by the discussion of the Lake Superior Consolidated purchase, which covered a large amount of leased ore, is at least sufficiently high to represent an average for the entire ore property of the Corporation in April, 1901.

Section 12. Value of fee ore as indicated by calculations of "present worth" of royalties on leased ore.

A third method of estimating the value of the fee ore property of the Steel Corporation in 1901 is to compute the present worth at that time on the basis of royalties paid for leased ore.

As already explained on page 205, in the case of mining leases the operator (the lessee) does not acquire the ownership of the mining property, but simply acquires the right to mine the ore at his own expense in consideration of a certain stipulated royalty charge per ton, payable as the ore is mined and shipped. It may be repeated that the value of such a leasehold is not measured by such royalty charge, but instead by the premium or bonus at which the royalty contract could be transferred to another party. At the time when such a lease is originally made the royalty would ordinarily represent the full market value of the mining privilege; that is to say, the fee owner of ore would not ordinarily lease an ore deposit at a royalty of 25 cents per ton if the going rate of royalty on similar deposits in the same vicinity was any higher. Therefore, if the original lessee decided at once to sublease, ordinarily he would find that his leasehold had no transfer value. An exception to this might occur in cases where the rate of royalty was arbitrarily determined, as in the case of Minnesota State leases, which have been made at a uniform rate of 25 cents per ton, regardless of the probable quality and availability of the ore. Moreover, royalty contracts made under ordinary conditions and originally having no transfer value frequently possess such a value at a subsequent date. This may be due to developments either in the mine itself, or in general conditions of the mining business, which make it possible to dispose of the leasehold at an advance or premium over the royalty payable. Such a premium usually takes the form of a cash bonus; it may, however, be expressed in an additional or increased royalty paid by the sublessee to the prior lessee.

Where such a bonus is paid for an unimproved ore property, it represents the equity value in the ore itself. In the case of an improved mine, however, the bonus is often paid, either wholly or in part, on account of such improvements, as, for instance, shafts, or stripping of the overburden from the ore body. However, in this case, the bonus would represent the full transfer value of the leasehold at the time.

In cases where a lease is transferred or sublet in consideration of an increase in royalty the transfer value of the leasehold may be calculated from such additional royalty by the discount method in the manner explained below. (See pp. 217–219.) But such additional royalty, of course, does not indicate any value for the leasehold of the sublessee, because he must be assumed to have agreed to pay a royalty equal to the full market rate, so that he could not immediately transfer his leasehold at any advance over what he had himself agreed to pay. In such a case the sublessee has no transferable interest or asset of appreciable value in the ore property. In other words, a royalty payable does not represent an asset or investment to the lessee paying it. The interest or equity of such lessee is simply the price or consideration at which he could transfer his leasehold to another party, either by obtaining a cash bonus or an advanced royalty over and above that which he himself has contracted to pay to the fee owner or to the prior lessee; that is, as already explained (see p. 205), a royalty payable represents an expense or operating cost to the lessee. Therefore, in computing the assets of a mining company operating a leasehold, it would be entirely wrong to multiply the estimated tonnage in the ground by the rate of royalty payable, although this has frequently been done in such calculations.[1]

While such equity of a lessee may be expressed either by a cash bonus or an advanced royalty, the cash bonus is by far the most common method, and for this reason, as well as for clearness and convenience, in the following discussion such transfer value of a leasehold will be referred to as a cash bonus value.

While, however, the royalty payable does not in any way measure the value of the interest of the lessee in the ore, nevertheless, as shown below, it may be used as a basis for calculating the current market value of the ore to the owner of the unencumbered fee. The principle is as follows: If all the ore in a mine were mined in a single year, the royalty per ton, multiplied by the total tonnage extracted (plus any bonus for ore as distinct from improvements), would represent the approximate total value of the ore in the ground to the fee owner, but since the ore is taken out gradually year by year the present value of the royalty is reduced according to the length of time that the ore remains in the ground, for royalty payments (except as to any stipulated minimum) are made only as the work of extraction and shipment proceeds. Obviously, the present worth of the royalty for the output of a distant year is less than the value of the royalty for the same amount of production in the current year, first, because the lessor (i. e., the owner of the ore) does not receive payment therefor until the ore is produced and shipped, such payment having a present value determined by the principles of discount, and, second, because he is meanwhile exposed to various risks attendant on the progress of mining the ore, which tends of course to enhance the rate of discount. Therefore the fee owner naturally would be willing to sell his mine at a sum considerably less than the aggregate of the royalty payments which he might expect to realize if he leased it over a long period of years. Similarly, the lessee, if he were to purchase the mine in fee instead of making a lease, would expect to pay very much less than the aggregate of such royalties. The exact price which he would be willing to pay probably would not be computed by this method. But it is reasonably certain that on the average such cash prices for ore in fee would be less than the present worth of the aggregate royalty payments, discounted at a reasonable rate of interest. A particular reason is that a fee purchaser must bear the risk of ownership, such as the failure to find as much ore as expected, the discovery of more valuable deposits by competitive interests, or other contingencies which might adversely affect the value of the deposit, particularly the possibility that the ore might not be extracted as rapidly as anticipated. Again, the provisions of iron-mining leases are in many respects liberal to the lessee, thus making him the more indisposed to purchase in fee, unless the price is low. Thus in ordinary mining leases the lessor does not fix the quantity which the lessee must extract each year, but leaves the lessee free to produce as much as he may see fit, subject usually to a stipulation that in any event he shall pay a royalty each year on a certain minimum tonnage. The minimum tonnages thus stipulated, however, are, as above stated, usually comparatively small, although not invariably so. This arrangement, it will be seen, virtually allows the lessee to suspend operations in case he later finds he can secure ore more cheaply by other means, or in case he can not use the ore to advantage for the time being. For these and other reasons, royalty payments when reduced to a present-worth basis would very naturally show a higher total amount than a purchaser would ordinarily be willing to pay outright in cash, even assuming that the total quantity of ore leased was accurately known, which is not the case.

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[1] Such a method of calculating the investment in an ore property is not only absurd for the reasons just given, but also for the further reason that it takes no account of the necessity of determining the "present worth" or discounted value of the royalty.

It may, therefore, be assumed that if the entire 700,000,000 tons of ore estimated to have been acquired by the Steel Corporation in 1901 had been bought in fee the cash price certainly would not have exceeded the present worth of the same deposit obtained by discounting the current rate of royalty for such ore on new leases, together with proper allowance for any bonus values; it probably would have been much less. A computation of such indicated present worth of the royalties, therefore, will be of great service as fixing a maximum limit of valuation. In making such a calculation of the "present worth" of ore in 1901 it is necessary to determine four factors—(1) the estimated tonnage of the deposit; (2) the average royalty per ton and the approximate bonus per ton; (3) the rate of interest at which to discount the future royalty payments; (4) the estimated duration of the deposit.

It should be borne in mind that such computation of the present worth of royalty payments is made in order to ascertain the value of ore in the ground in 1901, with a view to establishing an average figure which may be applied to that portion of the Steel Corporation's ore property which was owned in fee.

TONNAGE OF THE DEPOSIT.—The amount of the deposit which, as already stated on page 205, has been accepted at 700,000,000 tons, will serve as the basis of this discussion. Although only one-half of this total has been assumed to have been held in fee in 1901, it will be much more convenient for reasons shown later to base calculations on the total tonnage, and then apply the average results to that portion held in fee. (See note, p. 228.)

It may be noted that of a given body of ore a certain portion will never be mined, since a part of the ore body is inevitably left in the ground. The estimated tonnage given above, however, will be assumed as a net total; that is, as the amount which can actually be extracted.

AVERAGE ROYALTY AND BONUS PAYMENTS.—The average royalty can be determined with comparative accuracy. The following table shows the average royalty actually paid in 1902 and 1903 on shipments[1] of ore produced from leased mines on the principal ranges of the Lake Superior district, as computed by the Bureau, the totals representing the great bulk of the output of those years (about 75 per cent in the case of the Mesabi Range and about 50 per cent for the other four ranges combined).

TABLE 19.—AVERAGE RATES OF ROYALTY ON IRON ORE PRODUCED IN LAKE SUPERIOR REGION IN 1902 AND 1903, AS INDICATED BY RETURNS TO THE BUREAU COVERING A LARGE PART OF THE SHIPMENTS IN THOSE YEARS.

Range.	1902		1903	
	Tonnage.	Royalty.	Tonnage.	Royalty.
Old ranges:				
Marquette	789,713	$0.212	774,304	$0.213
Menominee	2,769,383	.264	2,100,263	.273
Gogebic	2,736,308	.379	1,991,908	.404
Vermilion	1,163,102	.377	1,041,082	.389
Total, old ranges	7,458,506	.318	5,907,557	.330
Mesabi range	9,837,513	.250	9,712,274	.253
Total, all ranges	17,296,019	.280	15,619,831	.283

Figures for 1901 were not secured. There can be no doubt that the average royalties in that year did not differ appreciably from the figures here given. They probably were a little lower.

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[1] The shipments were practically identical with the production of these mines.

The table shows that the average rate of royalty on the Mesabi Range in 1902 was exactly 25 cents per ton, that for 1903 being only slightly higher. Royalties on the old ranges were somewhat higher, the average for these ranges combined being 31.8 cents per ton in 1902 and 33 cents per ton in 1903.

Combining the figures for all ranges, for the year 1902 the average royalty was 28 cents and for 1903 it was 28.3 cents per ton.

It might be argued, however, that these averages would not be a fair indication of the royalties obtainable in 1901 had all the Corporation's leaseholds been on the market. Undoubtedly some of the best mines of the Steel Corporation already under lease in 1901 at royalties of about 25 cents per ton could have been leased at higher figures had they then been offered for transfer. On the other hand, some of the older mines were nearly worked out, and probably could not have been leased at even the original royalties. Again, many properties acquired by the constituent concerns of the Steel Corporation in 1899 and 1900 contained ore of rather low grade. It is probable that some of these lower-grade mines had not been fully developed, and thus are not fully reflected in the actual royalty averages for 1902 above given. It would therefore be a very serious error to assume that the royalties at which a few of the choicest ore properties of the Steel Corporation might have been re-leased in 1901 would represent a fair average value of all leases in effect at that date.

Very convincing evidence of this is found in the fact that desirable mines were leased at substantially the average royalties above shown for some time after the Steel Corporation was organized. A fair idea of the rates of royalty and bonus payments in new leases entered into during the period from 1900 to 1902 is given by the following table compiled from data furnished by Dwight E. Woodbridge, a mining engineer of Duluth, Minn., and an authority on Lake ore matters:

TABLE 20.—ROYALTY AND BONUS PAYMENTS IN TRANSFERS OF VARIOUS LEASES OF IRON ORE MINES IN THE LAKE REGION, 1900–1902.

[Original data furnished by Dwight E. Woodbridge, of Duluth, Minn. Computations by Bureau.]

Mine.	Character of ore.		Estimated tonnage in deposit.	Cash bonus.	Bonus per ton.	Additional royalty.[1]	Original royalty.
	Per cent iron.	Per cent phosphorus.					
Albany	58.67	0.071	4,945,000	$150,000	0.03		0.25
Troy	57.10	.039					
Agnew No. 1	61.50	.050	4,516,000	150,000	.03		.25
Agnew No. 2	57.90	.055	8,500,000	250,000	.03		.25
Brunt	57.78	.047	2,500,000	60,000	.02		.25
Crosby	56.00	(2)	2,490,000			0.07	.20
Croxton	60.00	.050	4,250,000	60,000	.01		[3].20
Cypress	61.11	.058	1,970,000	(4)			.39
Elizabeth	56.63	.070	11,800,000	350,000	.03		.25
Flynn	56.50	.068	1,680,000	50,000	.03		.35
Hawkins	58.00 to 50.00	.043 to .050	15,000,000	525,000	.04		.20
Iroquois	57.05	.065	2,450,000	(5)			.25
Jordan	62.01	.063	1,570,000	120,000	.08		.20
Laura	60.15	.060	180,000	60,000	.06	.05	.25
Winnifred	62.09	.055	800,000			.10	
Leetonia	59.00	.050	4,516,000	40,000	.01		.38
Miller	60.82	.083	2,450,000	50,000	.02	.10	.25
Prindle	59.48	.068	3,027,000	200,000	.07		.25
Snyder	57.00	.088	6,000,000	110,000	.02		.20
Sweeney	60.40	.058	2,000,000	100,000	.05		.35
Susquehanna	60.50	.055	5,000,000	250,000	.05		.25
Utica	60.00	.055	2,550,000	150,000	.06		.25
Webb	58.08	.082	8,450,000	280,000	.03		.25
Total			96,644,000	2,955,000	.0306		.2528

[1] As part of bonus.

[2] No limit stated.

[3] Royalty on production of 100,000 tons or more per annum. Royalty on a production of 25,000 tons per annum, 25 cents; on 50,000 tons and less than 100,000 tons per annum, 22½ cents.

[4] No purchase price.

[5] Royalties to the amount of $50,000 advanced in lieu of cash bonus.

The highest royalty given in the table is 39 cents per ton, and the next highest 38 cents (in which case there was a bonus of about 1 cent per ton). On the other hand, there were several leases at 20 cents per ton royalty, with only small bonus payments. The average royalty for the 23 mines, it will be seen, was almost exactly 25.3 cents; the average bonus was 3 cents. Nearly all these mines were on the Mesabi Range. The close agreement of this average royalty for new leases with the 1902 average computed by the Bureau for that range, as given on page 219, is striking.

It should be noted that many of the mines listed in Table 20 were desirable properties, the ore showing a very high iron content, while the percentage of phosphorus—the presence of which in any large quantity is undesirable—was frequently low.

In addition to these leases reported by Mr. Woodbridge, mention should be made of the lease of the Chemung and Monroe properties in 1902, by the Shenango Furnace Company, both of which were taken at a royalty of only 25 cents per ton (although later transferred to the Steel Corporation on a substantially higher basis), and the Shenango mine at a royalty of 20 cents per ton and a bonus of $500,000. In 1902 the Clairton Steel Company leased the Little-Prindle mine at a royalty of 35 cents per ton. The average of these figures is in line with the average for the list given in the table.

On the old ranges the number of new mines opened after 1900 was comparatively small, but the rates of royalties on new leases in this district were substantially in harmony with the averages above given for those ranges. An exceptional instance occurred in the case of the Negaunee mine, which was leased at a bonus of $1,500,000 over and above a 30-cent royalty. This was a very valuable property on which a great deal of money had been spent in improvements, which undoubtedly explains in considerable measure the large bonus. It may be noted that the royalty itself, without the bonus, was somewhat less than the average royalties for old range mines, shown on page 219.

An exceptionally high bonus was also paid by the National Steel Company in 1899 for the Chapin mine, on the Menominee Range, in Michigan, this bonus amounting to no less than $5,000,000, of which $1,730,000 was paid in cash, the remaining $3,270,000 being paid by the assumption of outstanding indebtedness. The royalty, however, was only 22½ cents per ton. This was considerably less than the going rates of royalty on the Menominee Range for so desirable a property as the Chapin mine, and undoubtedly explains in part the unusually high bonus. Again, this mine had been brought to a high state of development, and there can be no doubt that a considerable part of the bonus represented the cost of improvements rather than the ore itself. The mine was an exceptionally large producer, with enormous quantities of ore in reserve. The large bonus is partly explained by these considerations, but was also probably due in part to the fact that the purchase was made at the very height of the steel trade boom of 1899.

The preceding evidence, therefore, indicates that the average rate of royalty in the Lake Superior region in 1901 was not in excess of 28 cents per ton, and that this figure may be considered as representing a fair average for all leases in effect at that time. Table 20, alone, indeed, would indicate that an average of 28 cents was large enough to cover bonus payments also so far as the Mesabi Range is concerned. However, an allowance for bonus payments is made later. (See p. 230.)

Of course, the value of ore has not remained constant, but has shown material appreciation. This appreciation, however, has unquestionably been due in considerable measure to the great concentration of ore properties which has taken place in the last ten years. This need not be considered in this discussion, however, since the fact that owners of ore property were ready in 1901 (and even in 1902) to lease mines freely for periods of from thirty to fifty years at an average royalty of not over 28 cents per ton warrants making calculations of the " present value " in 1901 on that basis.

Rate of interest for discounting royalty.—The rate of interest at which the " present worth " of an ore deposit should be computed can be determined within reasonably narrow limits. Obviously the present value of a given ore deposit increases as the rate of interest decreases; that is, if the ultimate value for a given ore deposit were discounted at the rate of 6 per cent, the indicated present worth of the deposit would be greater than if it were discounted at the rate of 8 or 10 per cent. As already pointed out, the leasehold system to a very large extent eliminates the element of risk for the lessee, since if it should prove that the amount of ore in the deposit was less than he had anticipated, he would be compelled to pay royalty only on the tonnage actually secured (not less, however, than the annual minimum fixed by the lease). Conversely, if he were to buy the mine outright for cash, he would have to assume the risk of a failure to secure as large a tonnage as expected. It is true, of course, that the amount of the deposit might prove larger than was expected, and this has frequently been the case in transfers of mining property in the Lake region. However, the risk as to the amount of deposit, and various other risks as well, exist and are, of course, borne by the lessor (except as to improvements and similar expenditures which may be made by the lessee).

Therefore, it is reasonable to assume that a steel concern having the alternative of purchasing a mining property in fee, as against leasing it at a fixed royalty for a long period of time, with a low " minimum," would be disposed to figure the present worth of the deposit in fee on a very conservative scale, or, in other words, in so far as the purchaser calculated this fee value on a discount basis, he would be inclined to use a much higher rate of interest than the going rate for conservative investments of a stable character. If the risks attaching to the purchase of iron-ore properties were negligible, a purchaser might discount the value by using the rate of interest obtainable on safe investments. But since there obviously is a considerable risk in the ore mining business, he would use a higher rate, and probably a considerably higher rate. The Bureau has computed the indicated present worth on the basis of several different rates of interest. (See p. 226.) As shown later, it has given chief weight to the results obtained with an interest rate of 6 per cent. In accepting such a rate there can be no doubt that the Bureau arrives at results which do not underestimate the value of the ore.

It may, in fact, be objected that the Bureau has been too liberal in this respect, and that it should have used a higher rate of interest. Indeed, some experts on ore values are inclined to use as high a rate as 10 per cent. However, in dealing with a deposit of as much as 700,000,000 tons, a portion of the speculative risk which is incurred in the case of purchases of individual mines is undoubtedly eliminated, so that there is good reason for not using so high a rate. Moreover, as shown later, the difference between the total value of a deposit of 700,000,000 tons obtained by using, say, 8 per cent, as against 6 per cent, is not large enough to be of special importance in this discussion. (See Table 21, p. 226.)

Duration of the deposit.—The fourth factor, namely, the rate of exhaustion of a deposit, has a direct bearing upon the total value. A rapid rate of production tends to increase the "present worth." Conversely, the longer the ore remains in the ground, earning nothing and subject to taxation, the smaller the immediate value or present worth of the deposit will be at a given rate of royalty.

The rate of production must be estimated. On page 225 it is shown that the yearly output of the Steel Corporation in the Lake region has in the past ten years risen from about 13,000,000 tons to over 23,000,000 tons. If an extremely scientific estimate of the value of the Steel Corporation's ore property by this method were to be undertaken, it would be necessary to make an estimate of the probable rate of production from year to year during the estimated life of the deposit. Scientific estimates of the probable exhaustion of ore reserves based upon experience invariably follow the rule that the rate of production of a given deposit can not constantly increase throughout the entire period of production, but that after increasing for a period will tend to diminish; moreover, the decrease probably will be at a more rapid rate than the increase. This is partly because the development of a great mining property necessarily requires time, while the demand itself is a matter generally of gradual growth. At first the rate of production tends to increase only slowly. After development has reached an advanced stage, the rate of production increases very rapidly. As the maximum stage is reached the rate tends to remain fairly constant for a time. As the deposit becomes exhausted, however, the annual capacity of the mines to produce declines, while the cost of production ordinarily increases, so that a rapid reduction in the rate of output normally occurs.

In this estimate of the value of this ore property, however, it is not necessary to go into such refinements or to attempt to determine the "probable curve of production." With the tonnage under consideration, the difference between the result obtained by assuming a constant rate of output and that obtained by assuming a varying rate apportioned according to scientific calculations would not be important. Thus, as shown in a note at the end of this chapter, the value indicated by assuming that a deposit of 700,000,000 tons of fee ore, to be exhausted during a period of thirty-five years, at a uniform annual rate of production, with a royalty of 28 cents and interest at 6 per cent, is about the same as the value indicated by assuming a varying rate of production (the other factors remaining the same) in substantial accordance with scientific methods.

The production of the United States Steel Corporation from its Lake Superior mines has been as follows, the figures being for calendar years.

Year.	Tons.	Year.	Tons.
1901[1]	13,023,755	1906	20,645,148
1902	16,063,179	1907	22,403,801
1903	15,363,355	1908	15,129,313
1904	10,503,087	1909	21,606,184
1905	18,486,556	1910	23,264,515

[1] Includes production of constituent companies for period January 1 to March 31.

The average production for the first five years shown in the above table was approximately 14,700,000 tons. For the five-year period ended with 1910 it was at the rate of about 20,600,000 tons. (It may be noted that each period included a year of marked depression in the iron and steel industry.) It is reasonably safe to assume an increasing rate of production for many years.

Using as a basis the known production of the past ten years, aggregating approximately 176,000,000 tons, or just about one-fourth of the total deposit under consideration, it must be conceded that the remainder will not be exhausted during another ten-year period. It seems altogether unlikely that it will be exhausted within the next twenty years; that is, during a period of thirty years from the formation of the Steel Corporation. Indeed, it is entirely possible that the original deposit, even if no additions had been made thereto, would not be exhausted within a period of thirty-five years from the time the Steel Corporation was organized.

Of course, since 1901 the Steel Corporation has purchased a great deal of additional ore property, and it is a fair question whether the production of the Corporation would have been as large as it has been if some of these further acquisitions had not been made. This, however, would mean that the life of the deposit under discussion would be extended, which in turn would result in reducing the aggregate value of the deposit in 1901, since, as already shown, the less rapidly the ore is exhausted, assuming a constant rate of royalty, the smaller the present value of the deposit as a whole. Therefore, in so far as the use of the known production of recent years may affect the calculation here made, this is in the direction of increasing valuations for the ore property rather than decreasing them.

INDICATED VALUATIONS.—In view of the obvious impossibility of fixing this time factor with certainty, computations have been made, assuming different exhaustion periods ranging from twenty-five to thirty-five years. The valuations indicated by these different factors of computation are given in the following table. The average present worth of a dollar for a given period at a given rate of interest is first ascertained, and then applied to the rate of royalty, 28 cents. The estimated tonnage of 700,000,000 tons is then multiplied by this resultant figure in order to get the total valuation. The aggregate present worth of one dollar due on the first of each year for a period of thirty years, discounted at the rate of 6 per cent, is $14.591; the average present worth of one dollar for this thirty-year period is, therefore, one-thirtieth of this amount, or, 48.637 cents. The present worth of 28 cents (the average rate of royalty), therefore, for the same period and at the same rate of interest, would be 28 per cent of 48.637 cents, or 13.6184 cents. This, in other words, would be the indicated present worth of each ton of ore in the ground *if owned in fee*, assuming the exhaustion period to be thirty years.[1] Multiplying this by 700,000,000 tons gives a total of $95,329,000 as the value of the entire deposit in 1901 if owned in fee.

This calculation, it may be noted, assumes that the royalty is paid at the beginning of each year; as a matter of fact royalty payments are usually made quarterly. This consideration, however, would not affect the computations here made to an appreciable extent.

TABLE 21.—INDICATED PRESENT WORTH OF AN IRON ORE BODY OF 700,000,000 TONS, AT A ROYALTY OF 28 CENTS PER TON, WITH VARYING RATES OF INTEREST AND PRODUCTION.

Exhaustion period.	Estimated annual production.	Indicated valuations.							
		Interest at 5 per cent.		Interest at 6 per cent.		Interest at 7 per cent.		Interest at 8 per cent.	
		Per ton.	Total.	Per ton.	Total.	Per ton.	Total.	Per ton.	Total.
	Tons.	*Cents.*		*Cents.*		*Cents.*		*Cents.*	
35 years....	20,000,000	13.7544	$96,281,000	12.2948	$86,064,000	11.0832	$77,582,400	10.0696	$70,487,200
30 years....	23,330,000	15.0649	105,454,000	13.6184	95,329,000	12.3928	86,749,600	11.3478	79,434,600
25 years....	28,000,000	16.5743	116,020,000	15.1766	106,236,000	13.9658	97,760,600	12.9125	90,387,500

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[1] It is worth noting that this method of computation may be followed even though the Steel Corporation later added greatly to its ore reserves, so long as it is assumed that the original ore body would last thirty years, whether used separately or in conjunction with subsequent purchases. If it be assumed that the original ore body would last longer than this, the aggregate value would be lessened. On the other hand, if it be assumed that this ore body would be exhausted within a shorter period, the value would be increased.

It should be kept constantly in mind that these calculations do not indicate the value of the leases of the Steel Corporation, but instead they indicate the value of the ore in the ground if owned in fee.

These calculations show that a royalty of 28 cents, discounted at the rate of 6 per cent, on a deposit of 700,000,000 tons of ore, to be exhausted during a thirty-five year period at a uniform rate of production, indicates a present worth at the beginning of the period of $86,064,000. Basing the calculations on an exhaustion period of thirty years, the indicated value is $95,329,000, and on a period of twenty-five years $106,236,000.

If the present worth of this ore body be discounted at the rate of 5 per cent instead of at the rate of 6 per cent, the resulting valuations would be somewhat higher, ranging from roughly $96,300,000 in the case of a thirty-five year period to $116,000,000 for a twenty-five year period.

Discounting the value at the rate of 7 per cent, the total indicated valuation, assuming the exhaustion period to be thirty years, is $86,749,600; and using an 8 per cent rate the total is $79,434,600.

A noteworthy feature of these computations is that, broadly speaking, the results obtained by using rather widely varying factors are not strikingly far apart. Thus the extreme range in the valuations obtained by using the four different rates of interest given in Table 21 and the three different exhaustion periods shown was from $70,487,200 to $116,020,000. By using only an exhaustion period of thirty years the range in the final results obtained by using the four different rates of interest is from $79,434,600 to $105,454,000.

It will be seen, therefore, that in such calculations of present worth considerable differences in the original factors in the problem would exert only a comparatively small influence on the final result. This fairly close agreement of the results obtained by different computations therefore indicates that a result arrived at with any reasonable factors must be somewhere near the mark. It will be noted that the highest figure reached in the computations given in Table 21 is only a modest fraction of the $700,000,000 valuation claimed by the Steel Corporation in 1902.

The Bureau is of the opinion that the result obtained by using an exhaustion period of thirty years and a discount rate of 6 per cent, while liberal to the ore property, is on the whole reasonable.[1] This gives a total value of $95,329,000 or 13.6 cents per ton. This is just about halfway between the extreme figures given in Table 21. The

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[1] It should be understood, of course, that this statement does not mean that the total reserves of the Steel Corporation in the Lake Superior region will be exhausted during such period, since, as above pointed out, the total tonnage has been greatly increased since 1901 by important acquisitions.

Bureau has not selected this result for this reason, however, but because the factors used in arriving at it seemed on the whole the most probable.

Even if it were assumed that the total tonnage of the Steel Corporation in 1901 was as much as 1,000,000.000 tons, comparatively little would be added to the total value of the deposit if the same annual rate of production were used, since this would mean that the additional tonnage would be extracted only at a distant date. For instance, the estimate of $86,064,000 based on a thirty-five year exhaustion period for a deposit of 700,000,000 tons (with interest at 6 per cent) is at the rate of 20,000,000 tons per year. At this rate a deposit of 1,000,000,000 tons would last fifty years. The present value of such a deposit, exhausted at an annual rate of 20,000,000 tons over a period of fifty years, at the rates of royalty and interest above used, would, however, be $93,564,000, or an increase of only $7,500,000. In other words, in this case an addition of over 40 per cent to the assumed tonnage results is an addition of less than 9 per cent to the indicated total value. Of course, if a higher rate of production were used, the aggregate value would show a greater increase.

The obvious reason, from a financial standpoint, for the lower present value of ore reserves not to be used until a remote period in the future, as compared with those to be used at an early date, is that during the entire period of nonuse the owner is realizing nothing from his investment in the property, while, on the other hand, he is bearing certain carrying charges, such as taxes.

Since, as repeatedly pointed out, only a portion of the ore property of the Steel Corporation was owned in fee in 1901, this average value of 13.6 cents per ton should not be applied to the total ore body of 700,000,000 tons. As shown on page 206, it has been assumed that in 1901 one-half of the estimated tonnage, or 350,000,000 tons, was owned in fee. At an average valuation of 13.6 cents per ton, the total value of this portion of the Corporation's ore reserve would be approximately $47,600,000.[1] While it is probable that this valuation is quite sufficient to cover the fee ore, the Bureau has made a substantial addition to it for possible bonus values, as explained in the next section.

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[1] The question might be raised as to the possibility of estimating the value of the fee property of the Steel Corporation in this manner separately from the leaseholds, namely, the assumed 350,000,000 tons of fee ore. This would introduce a number of complications and difficulties without corresponding advantages. In any case such an estimate would tend to reduce the value of the fee ore for the following reasons: The Steel Corporation at present naturally produces the great bulk of its ore from its leaseholds, as there is generally a time limit in the leasehold contract. Hence, a greater part of the fee ore would be left to be extracted at a distant date than of the leasehold ore. This would tend to reduce the indicated value of the fee ore, without resulting in any increase in the value of leasehold ore which is determined on a different basis.

Section 13. Estimated value of ore leases of the Steel Corporation in 1901.

It is now necessary to estimate the value of the leaseholds of the Steel Corporation in 1901 as distinct from the value of the ore held in fee.

The value of the leases—that is, of the privilege of mining ore at stipulated royalties—may be considered as measured approximately by the bonus payments which such leases would command if transferred. Generally speaking, the bonus is the amount paid for the purchase of a leasehold, with its improvements, if any. As already shown, the actual average bonus payments on 23 mines leased during the period 1900–1902, as reported to the Bureau by Dwight E. Woodbridge, a mining engineer of Duluth, were almost exactly 3 cents per ton. This may seem small. One reason why such bonuses have not been larger may be that it has been the policy of the State of Minnesota to lease State ore lands at a uniform royalty of 25 cents per ton. While this has not prevented the exceptionally valuable ore properties from commanding decidedly higher royalties, obviously the fact that desirable unimproved properties could be obtained from the State at royalties of 25 cents per ton had a very important bearing upon the transfer values of leaseholds generally.

While, as already shown, many leases were taken out in 1899 and 1900, and even later, at royalties of about 25 cents per ton, it is probably true that in some of these instances the ore was of lower grade than that covered by leases made earlier at the same rate of royalty; however, much of the ore covered by the new leases was of superior grade. In other words, while leases were still being made in 1901 at about 25 cents per ton, it is probable that earlier leases taken out on especially desirable mines at the same rate of royalty could have been transferred in 1901 at a considerable advance in the royalty or at a rather high bonus. Comparatively few such leases, however, were on the market. On the other hand, as previously pointed out, many leases previously acquired by the Steel Corporation were undoubtedly worth much less in 1901 than they were when originally made. Thus, some of the mines covered by such leases had been worked for years at high rates of production, and were rapidly becoming exhausted, so that the cost of operation was increasing while the annual output was decreasing. Both of these considerations tended, of course, to reduce the value of such leases.

It must be clear that the value of the leaseholds acquired by the Steel Corporation in 1901, when reduced to a per ton basis, was certainly less than the average per ton value of the ore owned in fee, because ore in the ground subject to a royalty clearly is worth less than the same ore free of any such charge. Both the fee and the leasehold properties of the Steel Corporation included very valuable mines, and there is no good reason to assume that the average quality of the ore held in fee was substantially different from that acquired under lease.

While it is entirely possible that the average bonus of 3 cents per ton, shown in Table 20, would be representative of the average transfer value of the Steel Corporation's leaseholds per ton of ore, the Bureau, in order to fix upon a figure which can not be challenged on the ground of undervaluation, has allowed double this figure, or 6 cents per ton. This average of 6 cents, applied to the assumed leasehold tonnage of 350,000,000 tons, gives a total of $21,000,000 for the transfer value of such leaseholds.

In computing the value of the fee ore in the preceding section, the royalty was taken at 28 cents, without any allowance for bonus. While, as stated, the resulting valuation of 13.6 cents per ton seems high in view of all other evidence, nevertheless, since it might be argued that had the fee ore of the Corporation been on the market in 1901 it would have commanded a bonus over the 28-cent royalty, the Bureau has also made here an addition of 6 cents per ton, or $21,000,000, to the value of the fee ore as above computed, this increase being equivalent to the average value of bonuses applied to leased ore. It is almost certain that this valuation for the fee ore is excessive. It gives the fee ore a value of 19.6 cents per ton, whereas the maximum price paid for such ore as late as 1909, according to competent authorities (see p. 208), was reported at 15 cents per ton.

Indicated total valuation by discount method.—The total indicated valuation of the Steel Corporation's interest in the entire deposit of 700,000,000 tons by this discount or "present-worth" method, therefore, amounts to $89,600,000, as follows:

1. $47,600,000, for the value of the fee ore based upon the average going royalty in 1901, without any allowance for bonus.
2. $21,000,000, to cover the possible bonus value of such fee ore over and above the preceding valuation, had it been available for lease in that year.
3. $21,000,000, for the transfer or bonus value of the leaseholds themselves.

While no specific amount has been allotted in this estimate of $89,600,000 for improvements to mining property, the bonus additions, aggregating for the fee and leased ore together no less than $42,000,000, undoubtedly include a very substantial and possibly an excessive allowance for such improvements. The actual book value of the improvements to the Steel Corporation's mining property in 1901, it will be recalled, was about $9,000,000. To add this sum to the preceding total of $89,600,000 would undoubtedly result in duplication.

It should be repeated that these estimates based on present-worth calculations are probably liberal for several reasons. In the first place, as shown on page 223, the purchaser of an ore body in fee probably would be disposed to discount its present worth at a high rate of interest, thus correspondingly reducing the price which he would pay. The Bureau probably would have been justified in using a higher rate than 6 per cent in its calculation.

Again, these computations are liberal, because it is almost certain that less than one-half the total tonnage of the Steel Corporation was owned in fee. Since the per-ton value of the fee ore is greater than the per-ton value of ore covered by leaseholds, a reduction in the Bureau's estimate of the tonnage owned in fee would involve also a reduction in the total estimated value of the deposit.

Still again, it may be repeated that a delegation of mining interests from the Mesabi region of Minnesota declared as late as 1909 that the highest price that they had been able to ascertain after inquiry to have been paid for fee ore was 15 cents per ton, whereas this calculation based on the discounting of royalties and allowing a bonus in addition resulted in a considerably higher figure.

Section 14. Summary of valuations of Steel Corporation's ore property in 1901.

While the indicated values of the Steel Corporation's ore property in 1901, arrived at by these different methods, show some variation, broadly speaking they work out in substantial harmony, especially when all circumstances are taken into consideration.

In section 10 it was shown that the known prices paid for ore in fee in 1899 and 1900 indicated that an average estimate of 15 cents per ton would undoubtedly be excessive and that an average of, say, 10 cents per ton would be sufficiently liberal. On this basis, the indicated total value of the entire deposit of 700,000,000 tons, *had it all been owned in fee*, would have been $70,000,000, or, allowing $9,000,000 for improvements, a total of $79,000,000. However, the estimate on this basis is ruled out of consideration because fully one-half the total was simply leased.[1]

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[1] It will be recalled that in discussing the value of fee ore in section 10 no deduction was made at the time to allow for the fact that a large part of the ore was simply leased instead of being owned in fee, as the question of leasehold values had not been discussed at that point. Applying the average value of 10 cents per ton to the one-half of the ore property which is here assumed to have been held in fee, would give a value of $35,000,000 for that portion. Adding 6 cents per ton for the remaining half of the property assumed to have been held under lease would give, as above, a value of $21,000,000 for these leaseholds. To this may be added $9,000,000 to cover improvements (although this results in some duplication in the case of the leasehold property, at least). On this basis, the total value of the property as calculated by the first method would be only $65,000,000; in this calculation no addition need be made for the fee ore on account of bonus payments, since the value of the fee ore is calculated on the basis of a fee price.

Moreover, it may be noted that even had the 350,000,000 tons of ore assumed to have been owned in fee been valued at 15 cents per ton the total value of the entire deposit, on the above basis, would have been only $82,500,000.

The estimate based upon the purchase of the Lake Superior Consolidated Iron Mines indicates an aggregate cost of anywhere from $70,000,000 to $94,000,000, had all of the ore property of the Steel Corporation been acquired on the same basis as the reserves of this concern; these figures include improvements as well as the ore itself.

The indicated valuation arrived at by calculations of present worth of royalties is somewhat higher. Using factors in the computation which are distinctly liberal, the indicated total value, including improvements, ranges around $90,000,000.

Altogether, therefore, there is good reason to consider an estimate of $90,000,000 for the value of the ore property of the Steel Corporation in 1901, including improvements, as not only reasonable, but liberal. However, in view of the obvious impossibility of arriving at absolutely correct results, the Bureau has arbitrarily increased its valuation of this ore property to the round sum of $100,000,000.

It might, indeed, be objected by some that the Bureau has been unduly liberal to the Corporation in this valuation of the ore property. In view of the various uncertainties in the problem, the Bureau has deemed it better to err on the side of liberality rather than otherwise.

This total of $100,000,000, it should be repeated, is the indicated market value of the ore property of the Steel Corporation—including fee ore, leases, and improvements—in April, 1901. The Corporation presumably would take the position that the market valuation then current was not the proper basis for capitalization. This question is not at issue at the moment. All that it is desired to show here is the approximate value of the tangible assets of the Corporation at the time of its organization and to compare this valuation with the capitalization of the company, without taking up in this connection the question whether the capitalization should have been restricted to the total of such tangible values.

Section 15. Comparison of Corporation's valuation of its ore with assessed valuations for all companies for taxation purposes.

It is interesting at this point to contrast the Steel Corporation's 1902 estimate of the value of its ore properties ($700,000,000) with the assessed valuation of iron-mining properties for taxation purposes. The Bureau does not, of course, contend that such tax valuations are a fair indication of true valuations, since such property at that period was seldom meant to be taxed at anything like the full value. But at least it is interesting to contrast the valuation claimed by the Corporation in defense of its immense capitalization with the valuations upon which taxes were paid.

Exact figures of tax assessments for the Steel Corporation alone are not available. It is sufficient to show that the valuation claimed by the Steel Corporation's officials in 1902 for the ore of that company was nearly 13 times the total assessed valuation of all iron-mining properties in Minnesota and Michigan (the only States in which the United States Steel Corporation then had ore holdings of any consequence). The assessed valuations of iron-mining properties in these two States for a series of years were as follows:

TABLE 22.—ASSESSED VALUATIONS OF ALL IRON-MINING COMPANIES IN MICHIGAN AND MINNESOTA, 1901-1906.[1]

Year.	Michigan.	Minnesota.	Total.	Year.	Michigan.	Minnesota.	Total.
1901	$22,791,978	$10,409,947	$33,201,925	1904	$22,412,904	$41,903,778	$64,316,682
1902	24,167,593	29,974,470	54,142,063	1905	22,072,513	42,294,003	64,366,516
1903	23,740,466	29,867,084	53,607,550	1906	22,607,154	69,851,845	92,458,999

[1] Includes personal property, which presumably was not included in the Corporation's 1902 estimate of $700,000,000.

It will be seen, therefore, that the assessed valuation of all iron-mining companies in Minnesota and Michigan in 1901 was about $33,000,000, and in 1902 about $54,000,000. Since the holdings of the United States Steel Corporation in 1902 probably did not greatly exceed one-half the total for these States, the enormous difference between the value placed by the Corporation on its ore property in defending its huge capitalization and the figure at which that property was assessed is at once apparent.

These assessed valuations, as just stated, are not presented here as indicating, even approximately, the true values of this ore property. Aside from the fact that mining property in Michigan appears at that time to have been assessed at only about 60 per cent of the true value and that in Minnesota at only about 40 per cent, the methods of valuation in the latter State prior to 1906 were extremely arbitrary, and there can be little doubt that the assessments arrived at were much too low. But at least the fact that the Steel Corporation in 1902, in defending its huge capitalization, placed a valuation of $700,000,000 on its ore property, whereas the total assessed valuation of all ore mines in the two States mentioned was only $54,000,000, may fairly be cited in this connection as further evidence of the unreliability of the estimate made by the Corporation.

In 1907 the Minnesota Tax Commission undertook an elaborate classification of the ore properties of the State, with the result that in recent years the assessed valuation of iron-mining property in Minnesota has been greatly increased. Thus, the assessed valuation in 1910 was in excess of $220,000,000.

III. SUMMARY.

Section 16. Total indicated value of tangible property of Steel Corporation in April, 1901.

Having thus determined upon an approximate valuation of the ore property of the Steel Corporation at its organization in 1901, a grand total of all the tangible property of the Corporation may be arrived at by combining this with the valuations for the other classes of property, as given on page 202. This grand total is presented in the following table. The valuations of the Steel Corporation in 1902, as submitted in the Hodge suit and already given in Table 16, are repeated for purposes of comparison.

TABLE 23.—VALUE OF TANGIBLE ASSETS ACQUIRED BY STEEL CORPORATION IN 1901, AS COMPUTED BY BUREAU, COMPARED WITH ESTIMATE OF CORPORATION SUBMITTED IN THE HODGE SUIT IN JULY, 1902.

Class of property.	Bureau's estimate of tangible values in 1901.	Corporation's estimate of tangible values in 1902.	Difference.[1]
Ore property	$100,000,000	$700,000,000	$600,000,000
Manufacturing plants, including blast furnaces	250,000,000	348,000,000	98,000,000
Railroad, steamship, and dock property	91,500,000	[2] 120,340,000	28,840,000
Coal and coke property	80,000,000	100,000,000	20,000,000
Natural-gas property	20,000,000	20,000,000	....
Limestone properties	4,000,000	4,000,000	....
Cash and cash assets	136,500,000	[3] 164,660,000	28,160,000
Total	682,000,000	1,457,000,000	775,000,000

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[1] A part of the differences between the two estimates is accounted for by additions made to property during the interval from April 1, 1901, to July 1, 1902, such additions, of course, being included in the Corporation's figures.

[2] This figure includes $40,340,000 of indebtedness which was not included in the estimate of the Corporation, this addition being made in order to render the estimates comparable.

[3] In arriving at this figure purchase-money obligations and real-estate mortgages of $16,369,000, which were deducted by the Corporation, were restored by the Bureau to make the amounts comparable.

The Bureau, therefore, as a result of its analysis of investment by departments of the business, finds the value of the tangible assets of the Steel Corporation in April, 1901—calculated on a liberal basis throughout—to be approximately $682,000,000. Of this, $100,000,000 represented the ore property, $250,000,000 the manufacturing plants and real estate, $91,500,000 the transportation property, $80,000,000 the coal and coke property, $20,000,000 the natural-gas property, $4,000,000 the limestone property, and the remainder, $136,500,000, the net current assets.

This total, it will be seen, is less than one-half the total as estimated by the Corporation in July, 1902. The excess of the Corporation's figures (after including bonded indebtedness of transportation companies and sundry mortgages and purchase-money obligations to make the two estimates comparable) is $775,000,000. A small part of the difference is due to additions to the investment up to July, 1902. However, the great bulk of the difference between the two valuations is found in the item of iron ore, on which the Corporation in 1902 placed a value seven times the value in 1901 as determined by the Bureau.

As repeatedly pointed out, the Corporation's estimate was prepared when it was on the defensive in an important lawsuit, and furthermore was prepared for the obvious purpose of justifying its huge capitalization. In view of all the evidence presented in this chapter, it is apparent that the Corporation's estimate of its ore property is entitled to practically no consideration. The valuation of the Bureau, on the other hand, has been reached after careful analysis by several different methods, and is entitled to great weight. Moreover, it must be regarded as a rather liberal expression of the value of the ore property in 1901.

It will be noted that the above total of $682,000,000 for all of the tangible assets does not include any specific allowance for good will or other intangible considerations. It may be that some of the valuations above given are sufficiently liberal to include a small allowance for intangible considerations. It is probable, however, that the aggregate of any such amounts is comparatively unimportant.

As a matter of fact, as previously pointed out, the element of good will in the steel industry appears to be much less important than in industries where brand values and trade-marks are important factors. Thus, pig iron of a certain manufacturer does not ordinarily command any special premium over pig iron of the same general description produced by another maker. The same would be substantially true of crude steel and of most of the steel products made by the Steel Corporation. In the case of the Carnegie Company, the splendid organization and high efficiency of the working force undoubtedly gave the business a value in excess of the $160,000,000 of tangible assets credited to it by the Bureau at its organization in March, 1900. However, much of this, instead of being good will which could be permanently transferred, was nothing more than the efficiency of the personnel of the staff, which, in the absence of long-term contracts with the United States Steel Corporation, could not be regarded as at all a permanent or certain addition to its intangible assets. Indeed, subsequent history shows rather frequent withdrawals of the old Carnegie Steel interests from the United States Steel Corporation. Therefore, while the services of these individuals imparted to the business of the Carnegie concern a high degree of earning power as distinct from the value of its tangible assets, this was a consideration which could not properly have been capitalized, at least at any considerable figure, by the Steel Corporation.

It may be repeated that the Bureau's figures do not allow for any additional value which may have been imparted to these properties by the mere act of consolidation. A large part of any such addition is properly excluded from consideration, as it must have been due in a measure to concentration of ownership and control or the restriction of competition. While the merger of such properties, particularly on account of greater integration, might have imparted a considerable value to them as going concerns over and above the aggregate of the valuations prior to consolidation, it is impossible to separate any such increase in value, due to coordination and integration, from the increase due to the elimination of competition, and therefore no quantitative statement of such additional value has been attempted by the Bureau. This matter of merger value is discussed at more length elsewhere. (See pp. 325–327.)

NOTE EXPLAINING PRINCIPLE OF PLOTTING CURVE OF PRODUCTION IN DISCOUNTING ROYALTIES OF LEASED ORE.

It will be recalled that in discounting the value of royalties on leased ore, on pages 224–225, it was pointed out that if a strictly scientific method were to be followed, it would be necessary to plot the probable "curve of production" yearly, instead of assuming a uniform annual rate of production, as was done in the computations summarized in Table 21, on page 226. As there pointed out, in the early stages of the development of a large ore deposit the production tends to increase very slowly until the mine is fairly opened so that large-scale operations are possible. When this occurs there should be a very rapid increase in the production for a time. As the maximum production is reached, the rate tends to remain constant for a time. As the difficulties of mining increase, however, owing to the necessity of going to greater depths and owing to increased costs, this rapid rate of production is checked and in the final stages of the development of the mine—that is, when the remainder of the deposit is rapidly becoming exhausted—the annual production ordinarily should show an abrupt decrease.

While, as already stated, a strictly scientific calculation of the probable curve of production would involve great pains, the allotment given in Table 24 is sufficiently in accord with scientific methods to serve the purposes of this discussion.

TABLE 24.—INDICATED "PRESENT WORTH" OF THE FEE OF AN IRON-ORE DEPOSIT OF 700,000,000 TONS, OBTAINED BY DISCOUNTING A ROYALTY OF 28 CENTS PER TON AT 6 PER CENT OVER A PERIOD OF THIRTY-FIVE YEARS, BASED ON A VARIABLE RATE OF PRODUCTION.

Year.	Estimated annual output.	Royalty.	Present worth for year given at 6 per cent discount of—		Present worth of each year's output.
			$1.00.	$0.28.	
	Tons.				
1	13,020,000	$0.28	$1.000	$0.2800	$3,645,600
2	13,885,000	.28	.9434	.2642	3,667,751
3	14,750,000	.28	.8900	.2492	3,675,700
4	15,615,000	.28	.8396	.2351	3,670,899
5	16,480,000	.28	.7921	.2218	3,655,066
6	17,530,000	.28	.7473	.2092	3,668,047
7	18,765,000	.28	.7050	.1974	3,704,211
8	20,000,000	.28	.6651	.1862	3,724,560
9	21,235,000	.28	.6274	.1757	3,730,395
10	22,470,000	.28	.5919	.1657	3,723,998
11	23,470,000	.28	.5584	.1564	3,669,581
12	24,235,000	.28	.5268	.1475	3,574,759
13	25,000,000	.28	.4970	.1392	3,479,000
14	25,765,000	.28	.4688	.1313	3,382,017
15	26,530,000	.28	.4423	.1238	3,285,581
16	27,030,000	.28	.4173	.1168	3,158,293
17	27,265,000	.28	.3937	.1102	3,005,585
18	27,500,000	.28	.3714	.1040	2,859,780
19	27,735,000	.28	.3503	.0981	2,720,360
20	27,970,000	.28	.3305	.0925	2,588,344
21	27,970,000	.28	.3118	.0873	2,441,893
22	27,735,000	.28	.2942	.0824	2,284,698
23	27,500,000	.28	.2775	.0777	2,136,750
24	27,265,000	.28	.2618	.0733	1,998,634
25	27,030,000	.28	.2470	.0692	1,869,395
26	25,330,000	.28	.2330	.0652	1,652,529
27	22,165,000	.28	.2198	.0615	1,364,123
28	19,000,000	.28	.2074	.0581	1,103,368
29	15,835,000	.28	.1956	.0548	867,251
30	12,670,000	.28	.1846	.0517	654,887
31	10,120,000	.28	.1741	.0487	493,330
32	8,185,000	.28	.1643	.0460	376,543
33	6,250,000	.28	.1550	.0434	271,250
34	4,315,000	.28	.1462	.0409	176,639
35	2,380,000	.28	.1379	.0386	91,897
Total	700,000,000				86,372,714

In this table the early stages of production are not shown, since in the first year given the production of the Steel Corporation (based partly on acquisitions of ore property subsequent to its organization) had already reached 13,000,000 tons. The total production for each of the first two five-year periods as here given is very close to the actual production of the Steel Corporation for those periods. The actual yearly figures of production from 1901 to 1910, however, show very marked fluctuations, particularly on account of a heavy falling off in output in 1904 and 1908. Such exceptional movements are not taken account of in this table, since it would obviously be impossible to attempt to so forecast years of depression throughout the entire period.

In assuming the production for the first ten-year period at a total almost as large as that actually recorded by the Steel Corporation, the Bureau has been very liberal to this assumed original ore deposit of 700,000,000 tons, because, as already pointed out, the aggregate value of such a deposit increases with a high rate of exhaustion; that is to say, as the table clearly shows, a million tons of ore production in the first year is worth very much more than a million tons' production in the last year of the period.

While, therefore, it should be clearly understood that the Bureau is not assuming to predict what the actual yearly production would be from the assumed deposit of 700,000,000 tons, this table gives an idea of the principles involved in a scientific calculation of the probable duration of a given ore deposit.

CHAPTER IV.

SUMMARY OF EVIDENCE OF EXCESSIVE ISSUE OF SECURITIES BY UNITED STATES STEEL CORPORATION IN 1901.

Section 1. Comparison of Bureau's valuations with total outstanding capitalization.

The Bureau's estimates of the value of the investment of the United States Steel Corporation at its organization in April, 1901, arrived at by the three different methods employed—that is, by analysis of the assets of the constituent concerns, by the use of market quotations of securities of those concerns, and by departments of the business of the Corporation itself—may now be summarized and compared with the capitalization of the Corporation at that time. Such a comparison is given in the following table:

TABLE 25.—COMPARISON OF ESTIMATES OF VALUE OF PROPERTY OF UNITED STATES STEEL CORPORATION AT ITS ORGANIZATION IN 1901, WITH PAR VALUE OF ITS SECURITIES.

		Excess of securities over estimates.
Total capitalization in Apr., 1901, including underlying bonds and purchase-money obligations	[1] $1,402,846,817	
Investment in tangible property alone, indicated by historical analysis	676,000,000	$726,846,817
Value of all property, tangible and intangible, as indicated by market prices of securities of constituent concerns	793,000,000	609,846,817
Value of tangible property as estimated by departments of the business	682,000,000	720,846,817

[1] Excluding $535,407 unacquired stock in constituent concerns for which no corresponding deduction was made in the first and third estimates.

The Bureau's two valuations of the tangible property alone agree very closely, although to a very considerable extent they were arrived at independently of one another. The valuation based on market prices of the securities of the constituent concerns naturally is higher than the other two, since it includes intangible considerations as well.

It will be seen at once that the capitalization of the Steel Corporation in 1901 greatly exceeded the value of the property acquired as indicated by any one of the three methods employed. By the first method, that of historical analysis of the organization of the constituent concerns, the excess of capitalization over tangible assets was, roughly, $727,000,000. By the third method, which also considers tangible assets only, the excess is $721,000,000. Even on the basis of the second method, which, as repeatedly pointed out, is the public's estimate, through the stock market, of the value of the companies as going concerns and which therefore includes intangible as well as tangible assets, the excess is nearly $610,000,000.

Owing to the difficulty, and, indeed, to the practical impossibility, of arriving at a valuation of the intangible assets of the Corporation which would not be influenced by the element of combination (see p. 326), the Bureau has confined its study of the investment to tangible property. For this purpose it has accepted the valuation of $682,000,000 arrived at by the third method, in the manner already described in the preceding chapter. While, of course, absolute precision can not be claimed for this figure, it was reached only after very exhaustive analysis; moreover, in every case the Corporation was given the benefit of reasonable doubt, so that this result must be regarded as distinctly a liberal valuation of the tangible property of the Corporation in 1901. On this basis, no less than $720,846,000 of the total capitalization of the Corporation was unprotected by tangible property values; that is to say, the entire issue of, roughly, $508,000,000 of common stock and over $212,000,000 of the preferred stock had no tangible property back of it at the organization of the Corporation in 1901.

In this connection it may be noted that in testimony before the Ways and Means Committee, in 1908, E. H. Gary, chairman of the Steel Corporation, was questioned with respect to a valuation of $1,782,187,383 for the properties of the Steel Corporation at the close of 1907. An excerpt from his testimony before that committee follows:

> Mr. Cockran. Of this whole sum of $1,782,000,000, was not $1,000,000,000, at least, capitalized profits as distinguished from original investment?
>
> Mr. Gary. I should have to guess at that; but I should guess yes, including increases in value.

While an offhand answer to such an important question should not be given too much weight, the resulting valuation of, say, $782,000,000 for the properties at the time the Steel Corporation was formed is surprisingly in line with the valuation of the Bureau already given.

The Bureau does not for the purposes of the present discussion take up the question whether the Steel Corporation should have issued securities up to only the value of the tangible property, as here estimated. As previously pointed out, opinions concerning the proper basis of capitalization are very diverse. The Bureau is not concerned at the moment with the question of what would be the best method of capitalization, but with the relation between the capitalization actually determined upon and the value of the investment represented thereby. The question of the principles of capitalization is one of great general interest, but in this present discussion the Bureau is dealing only with the question of fact. On this point, as already stated, it is clear that there was an excess of more than $700,000,000 of capitalization over the actual investment in tangible property in 1901. Even granting that there may have been a considerable value in the intangible considerations, it is reasonably clear that at least the entire issue of common stock, setting aside all "merger value" (see p. 326), represented nothing but "water."

While, therefore, it is not the purpose of this report to say what should have been the capitalization of the Steel Corporation, it is obvious that the company was heavily overcapitalized, judged by any method of valuing its assets.

Section 2. Comparison of par value of securities of Steel Corporation itself with their market value.

Incidentally it is well to consider briefly the aggregate market value of the securities of the Steel Corporation itself. But it must be clearly recognized that this is in no sense a part of the previous discussion of the value of its assets, because such a computation introduces a wholly new factor, namely, the merger value given to the properties by the very act of combining them under a single great concern, and other intangible considerations.

The average price at which United States Steel preferred stock sold during the first year of the existence of the Corporation—this average being based on an average of the means of the highest and lowest quotations daily—was 94, and the corresponding average for the common stock was 44. The average price of the 5 per cent fifty-year bonds was approximately 115. The average price of the underlying bonds, mortgages, and purchase-money obligations can not be satisfactorily determined. Since transactions in some of these were very infrequent, and in some cases there were no recorded transactions, and since the total amount of these was comparatively small, they may be reckoned at par, as they have been in preceding tables of this sort.

Applying these average prices to the total outstanding capitalization of the Steel Corporation (including underlying bonds, mortgages, and purchase-money obligations) at the time of its organization, the indicated market valuation of these securities was approximately $1,133,144,631, as shown by Table 26 on the following page.

TABLE 26.—COMPARISON OF PAR VALUE OF STEEL CORPORATION'S SECURITIES WITH MARKET VALUE, BASED ON AVERAGE PRICES FOR THE FIRST YEAR AFTER ITS ORGANIZATION.

Security.	Par value.	Average price first year.	Market value based on average price, first year.	Excess of par value over market value.
Preferred stock	$510,205,743	94	$479,593,398	$30,612,345
Common stock	508,227,394	44	223,620,053	284,607,341
5 per cent bonds	303,450,000	[1] 115	348,967,500	[2] *45,517,500*
Underlying bonds, mortgages, and purchase-money obligations	80,963,680	[3] 100	80,963,680	....
Total	1,402,846,817	....	1,133,144,631	269,702,186

[1] Approximately.

[2] Excess of market value over par.

[3] Estimated. Many of these underlying securities were not on the market.

The par value of the Steel Corporation's securities, therefore, shows an excess over the market valuation of $269,700,000. Had the fifty-year bonds been taken at par instead of at the market value (which method might be justified on the ground that the premium was largely influenced by the term of these bonds, and the condition of the money market rather than by property values), the excess would have been about $315,000,000.

It should be unnecessary, however, to argue that a market valuation based upon the prices of the securities of the Steel Corporation itself is not a proper criterion by which to judge the real value of the assets of the Corporation at its organization. It will be remembered that in Table 13, on page 170, it was shown that the market valuation of the securities of the constituent concerns acquired by the Steel Corporation based upon the average prices of 1899 and 1900 (and including $25,003,000 new cash capital as well as underlying indebtedness at par) was $792,961,970. The market value of the securities of the Steel Corporation itself based upon the average prices recorded during the first year of its operation (except for the underlying indebtedness, which is taken at par) is $1,133,144,631, or $340,182,661 more than the market valuation of the securities acquired in the component concerns in 1899 and 1900.

It is apparent, therefore, that the aggregate market valuation was greatly increased as a direct result of the merger of these various constituent concerns under a single control. Undoubtedly much of this increase in market valuation was in the nature of an increase due to concentrated control over the industry. It is incredible that there had been any such enormous increase in the real value of the property in this short interval. A part of the increase was undoubtedly a temporary reflection of current conditions in the stock market. The year 1901 was one of marked prosperity in the steel industry, and despite the acute stock-market panic which occurred in May it was a year of firm and even of rising values for securities in general. The stocks of the Steel Corporation, moreover, undoubtedly were given support by large banking interests during the greater part of the organization period. In view of these facts, and more especially the fact that the Steel Corporation was a consolidation controlling a very substantial proportion of the steel business of the country, this market valuation of its securities of approximately $1,133,000,000 obviously exaggerates a fair valuation of the properties acquired as they existed under separate ownership. Nevertheless, even judged by this unduly favorable standard, the capitalization of the Corporation was very excessive.

It may be noted in this connection that in the latter part of 1903 and the early part of 1904, during a sharp reaction in the steel industry, the market value of its securities was very greatly reduced. Thus the preferred stock in 1903 sold as low as 49¾, and the common stock as low as 10 (the latter sold somewhat lower in 1904). The fifty-year bonds sold as low as 102, while the new 10–60 year bonds, which were issued in that year chiefly to retire preferred stock, sold as low as 65.[1] At these low prices (including underlying indebtedness at par in the absence of quotations), the total market value of the securities of the Corporation was only about $751,000,000,[2] or $382,000,000 less than the aggregate value shown by the 1901 prices.

The Bureau does not contend that this valuation at these low prices is a fair indication of the real value of the property at that time, but this figure illustrates the danger of using stock-market quotations as a conclusive test of values unless averaged over a long period under varying conditions. On the other hand, such stock-market prices, when averaged over long periods, frequently are an exceedingly valuable criterion.

Section 3. Evidence of overcapitalization in excessive issue of stock to underwriting syndicate.

Very convincing evidence of an excessive issue of securities by the Steel Corporation is afforded by the enormous payment which it allowed the underwriting syndicate, so called. The syndicate agreement (a copy of which is given on p. 383) provided that in addition to undertaking to secure at least 51 per cent of the stocks of the various companies originally to be acquired, the syndicate should furnish the Steel Corporation with $25,000,000 cash capital. In addition to this sum, the syndicate incurred expenses of about $3,000,000 attendant upon the organization of the Corporation, through fees, purchase of miscellaneous securities, etc., which sum should be added to the $25,000,000 cash capital provided, in stating the total cash consideration provided by the syndicate. For this total cash consideration of $28,000,000 and its services the underwriting syndicate received from the Steel Corporation the enormous total of practically 1,300,000 shares of its stock (half preferred and half common), of an aggregate par value of $130,000,000. That this huge block of stock was actually received by the syndicate was explicitly stated in the preliminary report of the Steel Corporation, which, after giving the amounts of stock issued to acquire the securities of the constituent concerns, further stated:

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[1] Transactions in the fifty-year bonds were limited. The other securities named, however, were heavily traded in in 1903. It may be noted that if the low-record prices of the common stock in 1904 were combined with the low-record prices of the other securities reached in 1903, the total valuation here reached would be somewhat reduced. It seems fairer, however, to take quotations for all securities at about the same date.

[2] In this calculation allowance has, of course, been made for the fact that $150,000,000 of preferred stock had been exchanged for a like amount of the 10–60 year bonds, while $20,000,000 of such bonds, moreover, had been sold for cash.

> The residue of the common and preferred stock of this Corporation delivered to the syndicate under the contract of March 1, 1901, and not used for the acquisition by it of the stocks of the specified companies, being the shares which, as stated in the syndicate circular of March 2, 1901, were to be retained by and to belong to the syndicate, amounted to 649,987 shares of preferred stock, and 649,988 shares of common stock. This residue of stock or the proceeds thereof, after reimbursing the syndicate the $25,000,000 in cash which it paid to the Corporation, and approximately $3,000,000 for other syndicate obligations and expenses, constituted surplus or profit of the syndicate.

PROFIT REALIZED FROM THIS STOCK BY THE SYNDICATE.—This enormous "residue," as it was termed, yielded a very large profit to the syndicate. At valuations of 44 for the common stock and 94 for the preferred stock (the average prices, respectively, at which these shares sold during the first year after the organization of the Steel Corporation), the total value of these stocks thus delivered to the syndicate would have been approximately $89,700,000. As a matter of fact, it appears that the amount actually realized by the syndicate was about $90,500,000. After reimbursing the syndicate for the $25,000,000 cash capital raised by it, and also for the $3,000,000 incurred in expenses, the syndicate managers paid out in profits to syndicate members substantially $50,000,000. Before distributing these huge profits, however, J. P. Morgan & Co., as syndicate managers, reserved as their compensation 20 per cent of the total profits. The total profits consequently were one-fourth greater than the amount thus distributed to syndicate members, or, in other words, they were, roughly speaking, $62,500,000.

It may be noted that about $4,000,000 of this total was not in the form of cash. After reimbursing the syndicate for its cash obligations of $28,000,000, the syndicate managers paid four cash dividends of $10,000,000 each (after reserving in each case their 20 per cent commission), and a final dividend of $6,000,000 in cash plus $4,000,000 paid-up participation in a syndicate then being organized by J. P. Morgan & Co. to underwrite the so-called "bond conversion" scheme of the Corporation, discussed elsewhere (Chap. VIII). There is some question whether this $4,000,000 participation in the second syndicate realized its par value on the liquidation of that syndicate, but any difference between the amount finally realized and the par value ($4,000,000) was undoubtedly so small that it can be disregarded. The profit on this operation over and above all expenses may therefore be fairly stated at $62,500,000.

There can be no question that this huge compensation to the syndicate, or, in other words, the enormous block of stock upon which this profit was realized, was greatly in excess of a reasonable compensation. The syndicate was, of course, properly to be reimbursed not only for the $25,000,000 new cash capital which it provided the Corporation, and for the $3,000,000 of expenses incurred, but was also entitled to some compensation for the labor and risk of raising these sums. Moreover, the syndicate presumably rendered some other services of value in facilitating the organization of the Corporation and the flotation of its securities, for which it would reasonably expect some compensation. However, these services certainly were not worth anything like the enormous price which the Corporation paid. Nor can this payment be justified on the ground of extraordinary risk. The Corporation was organized at a time of pronounced buoyancy in the stock market and decided prosperity in the steel industry. It is true that only a short time after its organization the famous Northern Pacific corner and the resulting stock-market panic occurred. Such a contingency, however, is one of the possibilities that all underwriting syndicates have to take account of, and was entitled to no more weight in this case than in the case of numerous other underwriting arrangements which were made by other large corporations at the same period.

It is, moreover, true that the nominal liability of the syndicate, or what may be called its nominal capital, was $200,000,000. This, however, was the liability of the syndicate subscribers to the syndicate managers and not to the Steel Corporation, to which its cash liability, as just shown, was only $25,000,000 (not including $3,000,000 of expenses). It was the understanding, tacit or expressed, that the syndicate managers did not expect to call upon the syndicate subscribers for more than a single payment of 12½ per cent of the total nominal liability ($200,000,000), or $25,000,000. As a matter of fact, that was the only call actually made. Had a further call been made upon the syndicate subscribers, this would have been to meet temporary exigencies accompanying the flotation of the Steel Corporation's stock, and not to make any further payment to the Corporation itself. The large nominal obligation of the syndicate subscribers to the syndicate managers apparently was determined upon in part with a view to disarming subsequent criticism of the enormous compensation which it received.

A very important consideration to point out is that while the syndicate was, from the standpoint of the prestige and reputation of the bankers identified with it, nominally compelled to see the organization of the Steel Corporation successfully through, there was no legal obligation of this sort whatever. Instead, a circular of the syndicate managers to the stockholders of the various constituent concerns which were to be acquired stated very positively that the syndicate managers might at any time wholly abandon the transaction, in which event the stockholders in the acquired companies would have no claim whatever against the syndicate managers. This is shown by the fourth paragraph in the official circular of J. P. Morgan & Co., the syndicate managers, as follows:

> The undersigned are authorized to proceed with the proposed transaction whenever in their sole judgment a sufficient amount of the stocks of said companies, or of any of them, shall have been deposited. *They reserve the right, at any time, in their discretion, to wholly abandon the transaction* and to withdraw their offer herein contained, as to all the depositors, by publication of notice of such withdrawal in two daily newspapers in the city of New York; and in that event all the deposited shares shall be returned without charge upon surrender of the respective receipts therefor. *In case of any such withdrawal* of the offer hereunder as to all or to any depositors, *such depositors shall have no claim against the undersigned*, and shall only be entitled to receive their deposited securities upon surrender of the respective receipts therefor.[1]

It may be objected, as just suggested, that it is almost incredible that the syndicate managers would abandon the transaction. Nevertheless, this distinct provision that they might do so if they saw fit, without giving any explanation and without rendering themselves in the slightest way liable, clearly is entitled to great weight in judging the risks assumed by the syndicate. As a matter of fact, as the sequel showed, the syndicate was compelled to bear only a very moderate risk, while it was one of the most profitable ever organized in the United States.

It is worth passing notice that J. P. Morgan & Co., the syndicate managers, in the closing paragraph of their circular to the shareholders, said:

> It is proper to state that J. P. Morgan & Co. are to receive no compensation for their services as syndicate managers beyond a share in any sum which ultimately may be realized by the syndicate.

As just shown, however, the share of J. P. Morgan & Co. in the profits of the syndicate, as syndicate managers only, was about

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[1] Italics by Bureau. (See Exhibit 4, p. 206.)

$12,500,000, in addition to whatever profits they may have made because of their participation in the syndicate as subscribers. In view of this profit, it is hardly remarkable that that firm received no further payment from the Steel Corporation itself.

In this connection it is also proper to point out that the syndicate managers were prominently identified with the management of several of the companies acquired by the Steel Corporation, and also with the management of that Corporation itself. Three partners of the firm were on the directorate of the Corporation, one of whom was also chairman of the finance committee. Moreover, several other leading interests in the underwriting syndicate were the heads of some of the companies acquired and members of the first board of directors of the Corporation. In other words, as managers of the Steel Corporation, these various interests virtually determined the compensation for their services as underwriters.

It may also be stated that in January, 1902, the syndicate managers proposed that a formal agreement of release be executed between themselves and the Steel Corporation concerning this syndicate operation. The following proposition was submitted to the finance committee of the Steel Corporation by the syndicate managers:

> The magnitude of the transactions, and the immense amount involved under the contracts of March 1, 1901, and April 1, 1901, render it important, and it is our desire, that all matters between the Corporation and ourselves, as syndicate managers or otherwise, relating in any way to the issue of the capital stock of your Corporation and to the acquisition of the stocks of other companies, should be definitely closed and settled in such manner that no possible question concerning the same or the amounts or profits involved can be raised in the future. We desire, if practicable, that such a final settlement, which it seems to us should be by way of mutual releases, be had before we distribute the profits of the syndicate among its members.

Such an arrangement was entered into and formally approved by the directors of the Steel Corporation on February 14, 1902. At that time, it may be noted, the profits of the syndicate were estimated by the syndicate managers at about $56,000,000. This proved to be an underestimate, and, as above shown, the total profits actually realized were about $62,500,000.

In addition to the importance of this payment to the underwriting syndicate itself as indicating overcapitalization, this transaction may also fairly be given weight in discussing evidence of excessive issue of securities with respect to the purchase of properties. A corporation which issued roughly $130,000,000 of its securities for a cash consideration of $25,000,000 plus such underwriting and promotion services and expenses as were involved in this case may fairly be regarded as disposed to issue its capital stock on an exceedingly liberal basis for the acquisition of properties. This syndicate arrangement, therefore, may properly be construed as confirming other evidence that the capitalization of the Corporation far exceeded the true value of its assets.

At the invitation of the Bureau, the syndicate managers in 1911 submitted a statement concerning this compensation of the syndicate. Their statement on this point follows:

> As stated in the first preliminary report of this company, submitted to its stockholders at the first annual meeting upon February 17, 1902, and then and there unanimously approved, there was allowed to the underwriting syndicate as its compensation 649,987 shares of the preferred stock and 649,988 shares of the common stock of the new corporation, out of which the syndicate provided the corporation with $25,000,000 cash and distributed approximately $3,000,000 for other syndicate obligations and expenses.
>
> We inclose a copy of the printed syndicate agreement of February 26, 1901, under which the net profits of the syndicate were distributable, and they were distributed one-fifth to the syndicate managers and the remaining four-fifths to the syndicate subscribers, including our firm.
>
> Inasmuch as these commissions and their payment were unanimously approved by the stockholders of the corporation, we should assume that your view (which we regret) that they were excessive in amount has regard, not to the parties immediately concerned, but to what you may consider to be a public interest. In this aspect it would seem to us that, if, as we believe, and as we have above stated, the properties acquired by the Steel Corporation were and are fully worth the par of the entire block of securities by it issued to the syndicate managers in payment therefor, no public injury could or would result from any subdivision between the syndicate managers and their associates of the securities so issued.
>
> We would suggest further that, as the transaction was unique, not only in character, but in immensity, it is possible that any standard short of that furnished by practical experience of necessity must be imaginary and perhaps illusory. Contingencies and reasons involved in this so large a transaction require and justify compensation at a rate which in lesser matters might seem excessive. No ordinary experience can supply a measuring stick for either the purchase price of the properties of the new corporation or the payment of the compensation for such acquisition.
>
> We would call attention also to the fact that the purchase price of the properties transferred under the first contract of March 1, 1901, covered the entire compensation received by the syndicate. The subsequent acquisition under the contract of April 1, 1901, of the so-called Rockefeller properties, the Pittsburg Steamship Company, and the Oliver Iron Mining Company were made by the syndicate managers not on their own account but for and in behalf of the new company, the United States Steel Corporation, and no commissions or compensation for this acquisition was asked or received by the syndicate managers.

The Bureau does not regard the above statement as an adequate defense of the enormous commission obtained by this underwriting syndicate. Undoubtedly the transaction was exceptional with respect to magnitude. This would undoubtedly justify a larger commission in the aggregate than would be justified in the case of a very small underwriting operation. Moreover, the magnitude of the operation might justify a somewhat greater allowance for contingencies, although, as already pointed out, every underwriting syndicate must run the risk of certain contingencies, such, for instance, as a violent disturbance in the stock market, or, on the other hand, a period of continued depression. So far as the above explanation of the syndicate payment rests on the assumption that the properties were worth the par value of the entire amount of stock issued therefor, it is obvious that this view can not be accepted. As a matter of fact, if the properties themselves were regarded by the vendors as worth par, it can not be conceded that those vendors would have been willing to surrender $130,000,000 of the entire capital stock to an underwriting syndicate, except on the ground that they expected to make such extraordinary profits out of the merger that they would thereby be reimbursed. In any event, it is obvious that any such large commission to an underwriting syndicate is a matter of vital importance from a public standpoint.

It may be noted that this statement of the syndicate managers calls attention to the fact that the entire commission was allowed under the first contract, which did not include the acquisition of the Rockefeller properties (the Lake Superior Consolidated Iron Mines and the Bessemer Steamship Company), the American Bridge Company, and the one-sixth interest in the Oliver Iron Mining Company and in the Pittsburg Steamship Company, but that no compensation was received by the syndicate managers for these later acquisitions. This simply means, however, that this syndicate commission covered the acquisition of only a part of the properties of the Steel Corporation. It may be noted in this connection that the second syndicate agreement—that of April 1, 1901 (a copy of this agreement appears on pp. 386–390)—contained a provision that the Steel Corporation, in addition to reimbursing J. P. Morgan & Co. for actual expenditures incurred in the acquisition of these properties thus subsequently brought in, should pay that firm "fair compensation for their services." While, according to the above statement, no such compensation was received under this second contract, this can hardly be regarded as remarkable, in view of the fact that the compensation under the first contract netted the syndicate the enormous sum of roughly $62,500,000, of which the syndicate managers received one-fifth, this not including any amount which they may have received as members of the syndicate.

Section 4. Summary of underwriting commissions in the organization of the Steel Corporation and its constituent concerns.

Another way of looking at this large compensation to the underwriting syndicate is that $28,000,000 of the preferred and $28,000,000 of the common stock were issued to cover the $28,000,000 cash liability and expenses of the syndicate, the common stock being regarded as a 100 per cent bonus with the preferred, as was so often done in organizing the constituent concerns. On this basis there would be left $36,998,700 of preferred stock and $36,998,800 of common stock as a " commission " in the strict sense, merely for the services of the underwriting syndicate as distinct from any cash consideration or expense.

This enormous commission to the underwriting syndicate of the Steel Corporation, it will be recalled, followed other heavy commissions of the same sort paid by most of the constituent concerns of the Corporation. The facts concerning the payments of such commissions by the subsidiary companies have already been summarized in Chapter II. (See p. 179.) It was there shown that the total amount of stock issued by seven of the constituent concerns (this not including the American Sheet Steel Company or the Shelby Steel Tube Company) as commissions to promoters of underwriting syndicates, exclusive of bonus stock issued for property or cash, aggregated no less than $63,306,811, of which $62,449,612 was common stock and $857,199 was preferred.

The amounts of stock thus issued as commissions by the subsidiary companies received, of course, the same terms of exchange in the acquisition of these concerns by the Steel Corporation as the other stocks of the same class. As already shown (see Table 4, p. 113), the rates of exchange in most instances were at more than par. By adding the amounts of United States Steel Corporation stock thus issued in exchange for these amounts of the stock of the constituent companies which were originally issued for commissions to the amount of the Steel Corporation's stock above, which may be regarded as such a commission in the strict sense (after deducting $28,000,000 of each class to cover the cash raised or expended by the syndicate), a total is reached which may be regarded as the amount of the Steel Corporation's stock issued directly or indirectly for promotion and organization profits. A summary of such total commissions is given in the following table:

TABLE 27.—AMOUNT OF STEEL CORPORATION'S STOCK ISSUED AS A COMMISSION TO THE UNDERWRITING SYNDICATE, AND AMOUNTS SO ISSUED IN EXCHANGE FOR STOCKS OF CONSTITUENT CONCERNS ISSUED FOR THE SAME PURPOSES, EXCLUDING IN ALL CASES STOCK ISSUED AS A BONUS FOR PROPERTY OR FOR CASH.

Company.[1]	Amount of stock issued to cover promotion charges.	Rates of exchange into U. S. Steel stock.		Total amount of U. S. Steel stocks issued in this exchange.	
		Preferred.	Common.	Preferred.	Common.
Federal Steel Company:					
Preferred	$857,192	110.00	....	$942,911	....
Common	3,599,619	4.00	107.50	143,985	$3,869,590
American Steel and Wire Company, common	11,600,000	....	102.50	....	11,890,000
American Tin Plate Company, common	10,000,000	20.00	125.00	2,000,000	12,500,000
National Steel Company, common	5,000,000	....	125.00	....	6,250,000
American Steel Hoop Company, common	5,000,000	....	100.00	....	5,000,000
National Tube Company, common	20,000,000	8.80	125.00	1,760,008	25,000,000
American Bridge Company, common	7,250,000	....	105.00	....	7,612,500
Total, subsidiary companies	63,306,811	....	....	4,846,904	72,122,090
Add for U. S. Steel Corporation, after deducting $28,000,000 of each class to cover cash provisions[2]	....	....	....	36,998,700	36,998,800
Grand total securities of U. S. Steel Corporation representing commissions to promoters and bankers for the Corporation and its constituent concerns combined	....	....	....	41,845,604	109,120,890

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[1] In this table nothing is included for the American Sheet Steel Company, owing to the absence of accurate information, although apparently there was a large issue of stock to the promoters of this concern. Again, nothing has been included for the Shelby Steel Tube Company, because of the drastic reduction in capitalization effected in the acquisition of this concern.

[2] The deduction of cash expenditures in arriving at the commission proper of the Steel Corporation is somewhat inconsistent with the method followed in the case of the other companies, where the commissions in stock, as stated, are the gross amounts, out of which the respective syndicates had to meet some expenses. In most cases, however, these expenses are believed to have been small, both actually and relatively, and, moreover, the amounts are not known. The expenditures in the case of the Steel syndicate, however, were definitely stated in the preliminary report of the Corporation, and, moreover, were large ($1,200,000 of the expenditures of $3,000,000 appears to have been used to acquire securities of the Carnegie Company). For these reasons it seemed fairer to make an allowance for these cash expenditures in the case of the Steel Corporation syndicate.

From this table it appears, therefore, that more than $150,000,000 of the stock of the Steel Corporation (this including over $41,000,000 of preferred stock and $109,000,000 of common stock) was issued, either directly or indirectly (through exchange), for mere promotion or underwriting services. This total, moreover, as noted, does not include anything for the American Sheet Steel Company, although presumably a large commission, possibly including some preferred stock, was obtained by the promoters of this concern, nor is anything added in the case of the Shelby Steel Tube Company.

It should be repeated that this enormous total of over $150,000,000 does not include common stock issued as a bonus with preferred for property or for cash, but simply what may be termed the promotion and organization commissions in the strict sense. In other words, nearly one-seventh of the total capital stock of the Steel Corporation appears to have been issued, either directly or indirectly, to promoters for their services.

CHAPTER V.

PRINCIPAL ACQUISITIONS OF PROPERTY BY THE STEEL CORPORATION SINCE 1901.

I. ACQUISITION OF COMPETING MANUFACTURING CONCERNS.

Section 1. Principal instances of this sort.

For some time after its organization, the United States Steel Corporation apparently made no effort to secure control of any of the large iron and steel concerns which competed with it. At the close of 1902, however, it made a very important acquisition through the purchase of the Union Steel Company, a merger of a former concern of the same name and the Sharon Steel Company. In 1904 it secured the Clairton Steel Company, a fairly important concern, while in 1907 the Tennessee Coal, Iron and Railroad Company was acquired. An idea of the significance of these various acquisitions is given briefly in the following sections.

Section 2. Purchase of Union Steel Company in 1902.

The acquisition of this company, which, as stated above, had just absorbed the Sharon Steel Company and the old Union Steel Company, is important, not only on account of its large production, but also because both the constituent companies had been organized by individuals who had previously been in the steel business, but who had sold out their properties to one or the other of the various consolidations which later constituted the United States Steel Corporation. This purchase, moreover, was of particular interest because the Union and Sharon steel companies were exceptionally aggressive competitors, with strong financial backing.

SHARON STEEL COMPANY.—The Sharon Steel Company was organized in October, 1899, to erect a steel plant at Sharon, Pa. Apparently its original intention was to confine operations chiefly to the manufacture of pig iron and heavy semifinished steel products. The plans were soon changed, however, so as to include a rod mill, a wire plant, wire-nail works, and auxiliary departments. Somewhat later the company also commenced the construction of a tin-plate plant of 10 mills, the number of which was subsequently to be increased to 20; this department was handled through a separate organization, the Sharon Tin Plate Company. Other enlargements were made from time to time.

The original capitalization of the Sharon Steel Company was $3,000,000. This was later gradually increased to $6,000,000, and in addition the company had a small bond issue. However, a large part of the enterprise was financed through subsidiary concerns, so that the capitalization of the parent company does not fairly represent the investment.

An account of the plant published in July, 1901, gave the capacity of the completed blast furnaces at 200,000 tons, not including another blast furnace then under construction. The company also had several open-hearth furnaces under way. There were two continuous wire-rod mills, with a capacity of 120,000 tons. The wire-nail plant was credited with a capacity of 1,000,000 kegs per year, and the wire-drawing plant with about 75,000 tons per year. The construction of a wrought-steel pipe plant was also undertaken about this time, and the capacities of other departments were increased.

It will be seen, therefore, that the company's operations were of a character to bring it into sharp competition with the United States Steel Corporation. It should be noted, moreover, that the company had taken important steps toward securing a supply of raw materials. It had acquired a valuable ore property on the Mesabi Range in the Lake Superior region, while it had long-time contracts with the Minnesota Iron Company for a supply of ore. It had also secured a large tract of coking-coal land in the Connellsville region, while it had other coal lands elsewhere; it also owned a limestone property very close to its manufacturing plant at Sharon, Pa., as well as some terminal railroad property. The company was, therefore, a well-integrated concern.

UNION STEEL COMPANY.—The Union Steel Company was organized in November, 1899, with $1,000,000 capital stock. The plant was located at Donora, Pa., on the Monongahela River. The company was originally started for the purpose of manufacturing wire rods, wire, and nails. It commenced operations in September, 1901, with a capacity at that time of about 200,000 gross tons of wire rods, 200,000 net tons of wire, and 1,000,000 kegs of nails.

In the meantime it had been decided to construct blast furnaces and an open-hearth steel plant. In connection with this integration of its manufacturing operations, the company acquired a considerable ore property through the Donora Mining Company, a subsidiary company with $500,000 capital stock. It also secured large tracts of coking and steam coal in the Connellsville region. In this connection it may be noted that, as in the case of the Sharon Steel Company, the Union Steel Company's extensions were largely financed through subsidiary concerns, so that the capitalization of the parent company itself in no way represented the investment in the property. (See pp. 282–286.)

Among other influential interests back of the concern was H. C. Frick. Mr. Frick at this time was also a director in the United States Steel Corporation.

MERGER OF UNION AND SHARON CONCERNS.—The strong backing of the Union Steel Company, together with its extensive operations, made it an important competitor of the United States Steel Corporation. Its operations assumed still greater significance when, toward the end of November, 1902, announcement was made of the merger of the company and the Sharon Steel Company, under the name of the Union Steel Company, to be capitalized at about $50,000,000, thus forming the largest consolidation in the steel industry proper which had been effected since the organization of the United States Steel Corporation itself. The two concerns, together, had at this time a pig-iron capacity of about 750,000 tons yearly, and an ingot capacity of about 850,000 tons—as against a capacity for the Steel Corporation at this time of about 10,000,000 tons—while they had greatly increased their outputs of finished products. (See Table 29, p. 269.) With this announcement were coupled intimations that plans were already projected for the construction of still further important works, as well as the acquisition of one or two other concerns then engaged in the manufacture of rods, wire products, sheets, and pipe. Moreover, there were rumors that the new concern might construct a railroad of its own from Lake Erie to the Connellsville coke region, with connections to the company's manufacturing plants. The impression was very general in steel circles that the consolidated company would assume a position of rapidly increasing importance in the industry.

These plans for the merger of the Sharon and Union companies had hardly been completed, however, before the further announcement was made (in the latter part of November, 1902) that the United States Steel Corporation had purchased the entire property, payment to be made through the issue of $45,000,000 bonds of the new Union Steel Company, to be guaranteed by the Steel Corporation.[1] The terms of purchase are discussed elsewhere. (See p. 282.) There can be no doubt that the principal motive of the Steel Corporation was to prevent the competition which the rapidly extending operations of the Union concern foreshadowed, and especially to eliminate the rivalry of Mr. Frick.

Section 3. Purchase of Clairton Steel Company.

On April 29, 1904, it was announced that the United States Steel Corporation had purchased the entire capital stock of the Clairton Steel Company; the property was turned over on the 18th of May.

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[1] A portion of this issue was reserved to complete improvements to the properties and to retire prior liens.

The Clairton Steel Company had been organized in 1901, as successor to the St. Clair Steel Company, to construct a large plant for the production of pig iron and semifinished steel products. A controlling interest in the concern was owned by the Crucible Steel Company, a consolidation of the leading crucible steel manufacturers of the country. From a statement later issued by the Crucible Steel Company it appeared that the Clairton company had been losing money, and that it required several millions additional working capital which the Crucible Steel Company apparently did not at that time feel in a position to furnish; the Clairton concern was in the hands of receivers at the time of its transfer to the Steel Corporation.

The manufacturing plant of the Clairton concern included about 140 acres of mill property at Clairton, Pa., on the Monongahela River, with three blast furnaces, twelve 50-ton open-hearth furnaces, a rolling mill, with blooming mills and billet mills, and auxiliary departments. The reported capacity of the plant was about 475,000 tons of pig iron per annum, about 400,000 tons of ingots, and about 325,000 tons of billets and slabs.[1]

The Clairton concern also had important ore and coking-coal properties. One of its ore properties was the St. Clair mine, on the Mesabi Range, with an estimated deposit of about 4,000,000 tons. It had a lease of the Little & Prindle iron mine, on the Mesabi Range, with an estimated tonnage of 3,500,000 tons. In addition the company had extensive holdings on the Marquette Range, in Michigan, the total of these being given in the annual report of the United States Steel Corporation for 1904 at 20,000 acres, all owned in fee.

The coal lands of the Clairton concern comprised 2,644 acres of coking coal in Fayette County, Pa.

The relative importance of the additions to the manufacturing property of the Steel Corporation through the Union and Clairton purchases is indicated in Table 29, on page 269. The cost of these acquisitions is discussed in Chapter VI.

Section 4. Minor acquisitions of manufacturing property.

Other manufacturing properties acquired by the United States Steel Corporation during the first few years of its existence were the Troy Steel Products Company and the Trenton Iron Company. Both of these were small concerns.

Troy Steel Products Company.—This concern was successor to the Troy Steel and Iron Company, which owned steel works at Troy. N. Y., and several blast furnaces at Breaker Island, N. Y. The company was unsuccessful, and in August, 1895, was sold to a reorganization committee. In 1896 the steel works were removed to Breaker Island; the capacity of the plant at this time was about 200,000 tons of slabs and skelp per annum. After this transfer of the steel works, however, the plant was operated only a few months.

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[1] The Crucible Steel Company, it may be noted, in transferring the property, made a ten-year contract with the United States Steel Corporation for a large amount of pig iron and steel which it needed for its own business.

The purchase by the United States Steel Corporation was made in 1902; the terms are discussed elsewhere. (See p. 289.) The concern at this time could not have been considered a competitor, although there had been some negotiations for its sale to interests outside of the United States Steel Corporation. The plant was never operated by the Steel Corporation. The steel works were dismantled in 1907. The blooming mill was removed to the South Chicago works of the Illinois Steel Company, and the blast furnaces were left standing idle. As noted later, certain Standard Oil capitalists, who were also directors of the Steel Corporation, were among the principal owners of the Troy concern.

Trenton Iron Company.—This concern was acquired by the Steel Corporation in July, 1904. The plant, which was originally built in 1845, consisted of a wire-rod mill and a wire works for the manufacture of wire rope and similar products. The annual capacity of the rod mill was only 18,000 gross tons. The acquisition, therefore, was insignificant as compared with those of the Union and Clairton steel companies, previously discussed.

Section 5. Acquisition of the Tennessee Coal, Iron and Railroad Company.

In the latter part of 1907 the United States Steel Corporation acquired the Tennessee Coal, Iron and Railroad Company. This was the leading concern in the southern iron and steel district, with an outstanding capital stock of about $30,000,000 and a bonded indebtedness of $14,226,000. The manufacturing properties included the Ensley Steel Works, at Ensley, Ala., with 100 acres of mill property, 6 blast furnaces, a Bessemer plant, 8 open-hearth steel furnaces, a blooming mill, a rail mill, and other auxiliary departments; also rolling mills at Bessemer, Ala., with plate and merchant mills. The company had 10 other blast furnaces at various other points. It owned the capital stock of the Birmingham Southern Railroad Company, with 31 miles of main and branch lines and about 70 miles of yarding and siding. The equipment of this road comprised 35 locomotives and 725 cars. The Tennessee Coal, Iron and Railroad Company also owned the entire security issues of various land companies adjoining its properties.

The most important assets of the Tennessee concern, however, were its enormous holdings of ore and coal, and there can be little doubt that the desire to secure these had much to do with its purchase by the Steel Corporation.

These ore and coal properties were very extensive. The 1904 report of the Tennessee Coal, Iron and Railroad Company placed the total ore tonnage at over 400,000,000 tons, and the total tonnage of coal at over 1,600,000 tons. The 1906 report of the company, however, stated that the ore reserves were, as computed by competent authorities, estimated to be 700,000,000 tons, and the coal at 2,000,000,000 tons.

More careful estimates were made subsequently by agents of the Steel Corporation. The estimates of these agents grouped these resources in three classes, namely, "proven," "probable," and "possible." Their estimate of the coal property of the company follows:

	Proven.	Probable.	Possible.	Total.
	Tons.	*Tons.*	*Tons.*	*Tons.*
Coking coal	217,000,000	90,000,000	150,500,000	457,500.000
Steam and domestic coal	68,000.000	351,800,000	520,000,000	939,800,000
Total	285,000,000	441,800,000	670,500,000	1,397,300,000

The iron-ore deposits of the company were estimated by the same agents as follows:

	Reasonably assured (including tonnage already developed).	Additional probable tonnage.	Total.
Red ores	175,600,000	279,600,000	455,200,000
Brown ores		3,150,000	3,150,000
Red ore of lower grade, but which may be of future value.	204,000,000	35,000,000	239,000,000
Total	379,600,000	317,750,000	697,350,000

While these figures, especially those for coal, are considerably under those given in the earlier estimates made by the representatives of the Tennessee Coal, Iron and Railroad Company, nevertheless they show beyond a doubt that the company's deposits of these raw materials are enormous. The value per ton of southern ore, however, is much less than that of Lake Superior ore; and the coking coal produced in the South is on the average inferior to northern coking coal.

The following table gives an idea of the relative importance of the Tennessee company and of the Steel Corporation from a producing standpoint, as indicated by the production of each in the year 1907. The relative capacity of the Tennessee company for steel rails and other rolled steel products, however, was somewhat greater than these 1907 figures of production would indicate. (See Table 29, p. 269.)

TABLE 28.—COMPARATIVE PRODUCTION[1] OF UNITED STATES STEEL CORPORATION AND TENNESSEE COAL, IRON AND RAILROAD COMPANY OF ORE, COKE, AND CERTAIN IRON AND STEEL PRODUCTS, 1907.

	By U. S. Steel Corporation.[2]	By Tenn. Coal, Iron & R. R. Co.	Total United States production.[2]	U. S. Steel Corporation's percentage of total of the United States.	Tenn. Coal, Iron & R. R. Co.'s percentage of total of the United States.
	Gross tons.	*Gross tons.*	*Gross tons.*		
Iron ore	22,403,801	1,576,757	51,720,619	43.3	3.0
Coke	[3]12,373,938	[3]1,170,826	[3]40,779,564	30.3	2.9
Pig iron	10,633,496	602,827	25,442,013	41.8	2.4
Ingots and castings	13,099,548	243,444	23,217,285	56.4	1.1
Rails	1,744,578	146,171	3,380,025	51.6	4.3

[1] For a statement of the capacity of the Tennessee concern, see Table 29, page 269.

[2] Annual Statistical Report of the American Iron and Steel Association, 1907, page 87

[3] Net tons.

EVENTS LEADING TO THE ACQUISITION OF THE COMPANY.—This purchase of the Tennessee Coal, Iron and Railroad Company occurred in the midst of the panic of 1907. At that time conditions in the stock and money markets were exceedingly strained; there had been a very general suspension of cash payments throughout the country. It was stated at the time that several million dollars of the stock of the Tennessee concern had been used as collateral for loans by a large banking and brokerage house in New York City, which had also borrowed heavily on other securities. It has been asserted that this situation was taken advantage of by the financial interests back of the Steel Corporation to secure the property at what has been termed a "bargain-counter" price, or, in other words, at virtually a forced sale. The Corporation, on the other hand, has asserted that it really did not particularly desire the property, but that the transfer of its control to the Steel Corporation was sought by others chiefly with a view to relieving the brokerage house in question, and the financial situation generally at the same time, and that it paid a fair price for the stock. The terms on which the Corporation obtained control of this company are discussed below. (See p. 289.)

The situation at this time was so unusual, and the evidence concerning this transaction so extremely conflicting, while, furthermore, the entire situation has been so extensively reviewed in a public way, that a survey of the circumstances need not be undertaken at the present time.

The acquisition of the Tennessee Coal, Iron and Railroad Company made the Steel Corporation the most important single factor in the southern iron region. Moreover, of course, it prevented rival interests from using the Tennessee concern as a nucleus for a formidable consolidation in the South which might oppose the Corporation. It is worth noting, in this connection, that the acquisition of the Tennessee company by the Steel Corporation followed efforts at such a merger of the former concern with the Sloss-Sheffield Steel and Iron Company (see p. 94), which had extensive furnace interests, in addition to large reserves of ore and coal, and the Republic Iron and Steel Company, which had important investments in the Alabama district, in addition to its extensive properties in the North. Plans for such a merger apparently were carried at one time far toward consummation, but were not completed.

II. ACQUISITION OF ADDITIONAL ORE AND COAL PROPERTIES.

Section 6. Acquisitions of ore property prior to the lease of the Great Northern holdings.

The United States Steel Corporation since its organization has repeatedly added to its holdings of ore property. As just shown, very extensive additions to its ore reserves were effected through the purchase of the Union-Sharon, Clairton, and Tennessee Coal, Iron and Railroad companies. A very large amount of ore property acquired by the Corporation, however, has been picked up in small parcels, and, moreover, at relatively small initial expense, owing to the usual practice of securing it on a royalty basis instead of by outright purchase in fee. No detailed description of these miscellaneous additions is necessary at this time. Two ore properties acquired by the Corporation prior to 1906, however, are of sufficient importance to warrant brief mention. These are the Chemung and Canisteo holdings, both on the Mesabi Range.

LEASE OF CHEMUNG IRON ORE PROPERTIES.—The holdings of the Chemung Iron Company were secured by lease in August, 1903. The ore deposit was estimated to amount to as much as 70,000,000 tons, mostly of Bessemer grade.

LEASE OF CANISTEO MINING COMPANY.—The ore holdings of the Canisteo Mining Company, located in Itasca County, Minn., were leased by the Steel Corporation in 1905. In addition to the royalty the Steel Corporation paid a bonus of $500,000 in cash.

The lease covered nearly 500 acres, and the deposit was estimated at over 100,000,000 tons. On this basis the bonus was equivalent to only about one-half cent per ton. The estimates of this ore body have, moreover, since been considerably increased. The ore in this tract, however, requires concentration.

Other specific acquisitions of mining property which may be noted in passing were the fee of the Wick mine, acquired in 1902 for $165,000. In 1904 the Arcturus mine was acquired at a royalty of 25 cents per ton plus a bonus of $100,000. The ore from this mine is sandy and has to be washed before shipment. The tract was a large one, with an estimated ore body of upward of 12,000,000 tons, so that the initial investment of the Steel Corporation (which is expressed by the bonus) was less than 1 cent per ton. In 1905 the Whiteside mining lease was acquired at a bonus of $100,000.

Section 7. Lease of ore properties from the Great Northern system.

The various acquisitions of ore properties in the Lake Superior region just described were, however, completely overshadowed in 1907, when the United States Steel Corporation leased a large part of the most valuable ore lands of the Great Northern Railway system. By this transaction the Steel Corporation acquired control of ore reserves generally estimated from 400,000,000 to 500,000,000 tons, while more liberal estimates were nearly double these figures. Owing to the great importance of this transaction and its many distinguishing features, a brief account of it is desirable.

The nucleus of the ore holdings of the Great Northern system was the so-called Wright & Davis ore property in St. Louis and Itasca counties, Minn. This included also a lumber railroad—the Duluth, Mississippi and Northern—which had extensions to the mining properties discovered on this tract.

This entire Wright & Davis property, including the railroad and certain timber and timber contracts, was sold early in 1899 to the Eastern Railway of Minnesota, a subsidiary of the Great Northern. The total consideration, as given in trade journals at the time, and apparently on reliable authority, was about $4,300,000. This was generally conceded to be a conservative valuation.

These Great Northern ore lands apparently were not taken into consideration at the formation of the United States Steel Corporation in April, 1901. Not long after this, however, rumors became current that the Steel Corporation desired to secure this ore property. As early as 1903 the trade journals were talking of the probable consummation of negotiations between J. J. Hill and the Steel Corporation for a lease of these ore lands. It was reported at the time that Mr. Hill was demanding a guaranty that the Great Northern should receive $1.80 per ton of ore delivered at Lake Superior, this covering 80 cents for freight and $1 for the royalty. The deal, however, was not consummated at this time.

Mr. Hill, acting for the Great Northern system, continued to pick up parcels of ore property in the Mesabi region until by 1906 he had acquired in all more than 65,000 acres, containing hundreds of millions of tons of ore.

On January 2, 1907, 39,296 acres of these Great Northern ore lands were leased to the Great Western Mining Company, a subsidiary of the United States Steel Corporation, the performance of the stipulations of the lease being guaranteed by the Steel Corporation.[1]

The Great Northern interests had also leased to various parties prior to December 7, 1906, 1,597 acres, leaving, after taking into account this lease to the Great Western Mining Company, a balance of 24,200 acres, which were not leased by the Great Northern to anyone. It will be noted, therefore, that the United States Steel Corporation's leasehold interest covered only about 60 per cent of the total ore lands of the Great Northern interests.

Terms of the lease.—The lease provides that the Great Western Mining Company (Steel Corporation) shall mine, and ship via the Great Northern, a certain minimum tonnage yearly, this minimum increasing from 750,000 tons in 1907 to 8,250,000 tons in 1917, after which it is to remain fixed at that figure until the expiration of the lease, as follows:

	Tons.		Tons.
1907	750,000	1913	5,250,000
1908	1,500,000	1914	6,000,000
1909	2,250,000	1915	6,750,000
1910	3,000,000	1916	7,500,000
1911	3,750,000	1917[2]	8,250,000
1912	4,500,000		

In the event of the Great Western Mining Company failing to mine and ship the required minimum quantity in any year, it nevertheless is to make payment for the full amount of the stipulated minimum. On the other hand, the Mining company is to be allowed certain credits in case its shipments in other years exceed the minimum; also, should it be found impossible economically to produce 750,000 tons of ore during the year 1907, the Mining company was to be relieved of that portion of the minimum represented by this deficiency, a corresponding addition, however, to be made to the stipulated amounts to be mined during the years from 1908 to 1916.[3]

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[1] The character of ownership or control by the Hill interest of this 39,296 acres was as follows:

	Acres.
Owned in fee	19,934
Owned in fee, jointly with other parties (of which the Great Northern's interest was 7,915 acres)	15,972
Held by lease	3,390
Total	39,296

[2] And each year thereafter.

[3] Of the stipulated minimum of 750,000 tons for 1907, only 137,000 tons were actually mined. This tonnage, moreover, was produced by the Hill interests, who turned the profits over to the Steel Corporation in return for the payment by them of the stipulated royalty. There was a provision in the lease for deferring payment of the royalties for the year 1907 to any date prior to January 1, 1917, which the Steel Corporation might find convenient, but in the case of such delay the Steel Corporation was to pay the royalty stipulated in the lease for the year in which payment was made; that is, if payment were made in 1908 there would be an increase of 3.4 cents per ton, and a corresponding increase if payment were made in a subsequent year. (See p. 262.)

The Great Western Mining Company mines the ore and delivers it to the Great Northern Railway at the nearest convenient point for transportation to Superior, Wis., where it is delivered to the lessees on board ships at the docks.

The lease as to the lands owned in fee by the Great Northern (see note, p. 261) is to continue until the Great Western Mining Company (Steel Corporation) has mined all ore containing 49 per cent or over of metallic iron, and upon the exhaustion of ore of such grade the lease is to be extended so long as the Steel Corporation desires to mine such ore as remains. As to the leasehold properties (subleased to the Great Western Mining Company by the Hill interests), the term of the sublease in each case was to be the same as that in the original leases, less a period of three months.

It should be noted that the Steel Corporation has the privilege of relinquishing the entire lease on January 1, 1915, on giving two years' written notice of such intention.

Dried ore containing 59 per cent of metallic iron is the standard on which royalties are computed. For ore of this grade delivered at the dock at Superior, Wis., the royalty and transportation charges combined were fixed for the year 1907 at $1.65 per ton. A differential of 4.82 cents per ton on or off this base price was established for each increase or decrease of 1 per cent in the amount of metallic iron in the ore (from ore of from 49 to 66 per cent, inclusive), as follows:

Iron content.	Combined royalty and transportation (per ton, 1907).	Iron content.	Combined royalty and transportation (per ton, 1907).	Iron content.	Combined royalty and transportation (per ton, 1907).
Per cent.		*Per cent.*		*Per cent.*	
49	$1.1680	55	$1.4572	61	$1.7464
50	1.2162	56	1.5054	62	1.7946
51	1.2644	57	1.5536	63	1.8428
52	1.3126	58	1.6018	64	1.8910
53	1.3608	[1] *59*	[1] *1.6500*	65	1.9392
54	1.4090	60	1.6982	66	1.9874

[1] Base.

Should the Mining company desire to mine and ship ore running less than 49 per cent in iron content, the total consideration is to be $1.10 per ton, this covering the delivery at dock at Superior, Wis.

The lease further provides that the royalty on the different grades of ore from 49 per cent and upward shall increase by 3.4 cents per ton each year during the life of the lease.

The freight rate for ore on this railroad from the mines to Lake Superior has always been at a flat rate of 80 cents per gross ton. Therefore, of the total consideration—$1.65 per gross ton—for 59 per cent ore in 1907 stipulated in this lease, 85 cents represents the mining royalty proper. The increase of 3.4 cents per ton in each succeeding year, it will be seen, is exactly 4 per cent of 85 cents. For ore of the other grades specified the annual increase in the royalty is the same, namely, 3.4 cents per ton; consequently, the percentage of increase for the lower grades is more than 4 per cent and that for the higher grades less.

Mr. Hill, of the Great Northern, has been quoted as saying of the quantity of ore covered by the lease, "experts have figured it from 400,000,000 to 600,000,000 tons, but it would not be surprising if operations would uncover 1,000,000,000 tons."

The unusual character of this lease and the apparent reasons why it was entered into are discussed elsewhere. (See Chap. VI, p. 318.)

Section 8. Acquisitions of coal and coke property since 1901.

LEASE OF POCAHONTAS COAL AND COKE PROPERTIES.—Since its organization the Steel Corporation has made very substantial additions to its holdings of coal and coke property. In December, 1901, it secured a lease of 50,000 acres of desirable coking-coal and fuel-coal property in the Pocahontas coal region. The preliminary report of the Steel Corporation for that year stated that with this acquisition it was estimated that there was controlled by the subsidiary companies " a sufficient quantity of the best and cheapest coking coal to provide, on the basis of presént consumption, for the necessities of all the furnaces of these companies during the next sixty years." The royalty was at the rate of 10 cents per gross ton of coal, or 15 cents per gross ton of coke. These were the usual rates of royalty in leases of coal lands in the Pocahontas district. The charge of 15 cents per gross ton of coke is equivalent to 13.4 cents per net ton, the unit commonly used in stating coke tonnages. The lease provided for the erection by the lessee of 1,000 coke ovens in the year 1902 and an additional 1,000 ovens in the years 1903 and 1904. The property is operated by the United States Coal and Coke Company, a subsidiary concern of the Illinois Steel Company.

OTHER IMPORTANT ACQUISITIONS OF COAL AND COKE PROPERTY.—In 1902, as already shown, the Steel Corporation acquired a considerable amount of valuable coal and coke property through its purchase of the Union Steel Company (already described in sec. 2). The purchase of the Clairton Steel Company, in 1904, included approximately 2,650 acres of coal lands in Fayette County, Pa.

In April, 1905, an important addition to the Corporation's coal and coke property was made through the purchase by the H. C. Frick Coke Company of the Hecla Coke Company, which had 1,072 beehive ovens, and which held a lease on about 1,200 acres of desirable coking-coal land in the Connellsville region. In the same year the H. C.

Frick Coke Company also acquired a tract of 1,126 acres of coking-coal land in the same region at about $800 per acre.

A tract of about 640 acres of coking-coal land in the Connellsville region was acquired in 1906. In 1907 an enormous addition to the coal property of the Corporation and a very important addition to its coke property were made through the acquisition of the Tennessee Coal, Iron and Railroad Company, already described in detail in section 5. In the same year an additional interest of 36.4 per cent of the Hostetter-Connellsville Coke Company, of which the Steel Corporation had previously owned one-half, was secured. The Hostetter-Connellsville coke property included 700 coke ovens and approximately 1,000 acres of coal lands in the Connellsville region.

In 1909 and 1910 the Corporation acquired very extensive coal properties in Illinois and Indiana.

An exceptionally important addition to the Corporation's coal property was made in June, 1911, through the purchase from the Pittsburgh Coal Company of about 7,000 acres of coking-coal property, known as the Colonial Coke Company tract, this being improved property; also about 9,000 acres of virgin or unimproved tracts of coal rights owned by the Monongahela River Consolidated Coal and Coke Company, the control of which is held by the Pittsburgh Coal Company. The total consideration was reported at approximately $17,800,000, in the form of 5 per cent thirty-five-year guaranteed bonds. According to a statement issued by the Pittsburgh Coal Company interests, the developed coking-coal lands, which included about 1,000 coke ovens, were transferred at an average consideration of $1,450 per acre, and the rights to the undeveloped coal property at $850 per acre.

III. ADDITIONS TO STEEL CORPORATION'S PROPERTY THROUGH NEW CONSTRUCTION.

Section 9. The Gary, Ind., plant.

Very important additions to the physical properties of the Steel Corporation have been made through new construction. The organization of the company had hardly been perfected when important plans were made for the extension and modernization of its manufacturing plants. A formal announcement in April, 1902, stated that the aggregate of such contemplated expenditures was in the neighborhood of $50,000,000, which it was proposed to secure through a bond issue in connection with the conversion of a portion of the preferred stock into funded debt. This plan, which is discussed elsewhere (see Chap. VIII), was delayed by litigation and was never carried out in its entirety. Nevertheless, the Corporation's earnings permitted the expenditure of large sums for construction.

The most important single piece of new construction was the erection of a new plant at Gary, Ind., through the Indiana Steel Company, a subsidiary concern of the Federal Steel Company.

The annual report of the Steel Corporation for 1905 contained the following reference to this plant:

> Although the capacity of the producing furnaces and mills located at Chicago and vicinity has been materially increased from time to time, it has not kept pace with the increased, and rapidly increasing, consumption tributary to this location; and therefore a large percentage of this tonnage is now supplied from eastern mills. In consequence of these conditions it has been decided to construct and put into operation a new plant to be located on the south shore of Lake Michigan, in Calumet Township, Lake County, Ind., and a large acreage of land has been purchased for that purpose.

The annual report for 1906 stated that about 7,500 acres of land had been acquired for the plant, for the city of Gary, and for railroad terminals. At that time the appropriations comprehended a plant of 8 blast furnaces, with the most modern equipment for unloading and handling ore, 56 open-hearth furnaces, blooming mill, rail mill, various finishing mills and auxiliary plants, as well as a harbor and docks. The expenditure contemplated for the work definitely decided upon up to that time was $40,000,000, not including nearly $5,000,000 which had already been expended in 1906. It was stated that the plant would ultimately have an annual capacity of 1,750,000 tons of finished steel.

The annual report of the Steel Corporation for 1910 showed that almost $70,000,000 had been expended on this Gary plant up to the close of that year, as follows:

For real estate and for development and construction work in the city of Gary, less credits for lands, lots, and houses sold	$10, 509, 325. 07
For construction of the manufacturing plants	53, 785, 876. 83
For terminal railroad work	5, 683, 493. 25
Total	69, 978, 695. 15

The same report of the Corporation, in describing the progress of the work on the Gary plant, contained the following:

> The construction and development work at Gary, Ind., progressed continuously and satisfactorily during the year 1910. At the steel plant of the Indiana Steel Company 6 of the 8 blast furnaces constructed have been satisfactorily operated. Of the three units constructed, each comprising fourteen 65-ton open-hearth furnaces, two units have been in operation. The rail mill has been in operation since February 17, 1909; the billet mill since August 16, 1909; the 18-inch merchant bar mill since December 16, 1909, and the 14-inch merchant mill since April 1,

> 1910. The axle plant is completed; the 160-inch plate mill will be ready for operation by April 1, 1911, and the three remaining merchant bar mills by May 1, 1911. Since the publication of the last annual report the construction of a continuous sheet bar mill was started. This mill will supply sheet bars for the sheet plant being constructed at Gary by the American Sheet and Tin Plate Company, a subsidiary of this Corporation. The new bar mill will be ready for operation by July 1, 1911. The by-product coke plant, construction of which was begun in June, 1909, is rapidly nearing completion, and it is expected the first battery of ovens will be placed in operation on or before April 1, 1911. This plant will have a total of 560 ovens of the Koppers type, and an annual capacity of about 2,500,000 tons. A gas-distributing system is being installed, by which all of the excess gas from the coke-oven plant will be utilized in the mill operations.
>
> The output of the Gary steel plant, of the Indiana Steel Company, in 1910, was as follows: 729,072 tons of pig iron, 1,006,252 tons open-hearth ingots, 435,142 tons open-hearth steel rails, and 340,993 tons of shapes, merchant bars, and miscellaneous steel products.

The construction of this great plant at Gary is of especial interest because it was entirely new and built as a model plant with the most modern equipment. A special feature of the plant is the large number of departments for the production of finished materials, such departments, as the foregoing excerpt indicates, being operated by the respective subsidiary concerns of the Steel Corporation. Two other noteworthy features of this Gary plant are the use of gas engines for the blast furnaces and the exclusive use of open-hearth furnaces for the production of steel.

Section 10. Other important additions to plants through new construction.

Other additions to the plants of the Steel Corporation through direct construction, as distinct from purchase, which are worthy of special mention, were the erection of two new blast furnaces and of mills for the manufacture of skelp and tubes by the Lorain Steel Company, at Lorain, Ohio; the construction of a new bridge plant by the American Bridge Company, at Ambridge, Pa.; the virtual reconstruction of the extensive McKeesport works of the National Tube Company; the construction of a steel plant at Duluth, Minn., and the addition of very important cement works under the control of a subsidiary concern, the Universal Portland Cement Company.

The Lorain tube plant involved a large expenditure. In 1904 more than $5,500,000 was expended on blast furnaces, with ore-handling machinery, skelp mills, and pipe and tube mills for this plant, while nearly $2,000,000 additional was later expended in completing it.

The reconstruction of the McKeesport works of the National Tube Company involved an expenditure of several millions of dollars.

This is of some interest in view of the fact that it had been supposed that the plant was in first-class shape. The National Tube Company, it will be recalled, was one of the most prosperous of the various steel consolidations operating in the period just preceding the organization of the Steel Corporation. (See p. 143.)

DULUTH STEEL PLANT.—The annual report of the Steel Corporation for 1910, in referring to this plant, said:

> Reference was made in the annual report for 1907 to the acquirement of a site for and the proposed construction of a moderate-sized steel plant at Duluth, Minn. During 1908 and 1909 the work done in connection with this proposition consisted only of preparing the site for the steel plant, the acquirement of right of way for and some construction work on the terminal railroad connecting the proposed steel plant with all trunk lines entering Duluth. In the early part of 1910 construction work was actively undertaken on both the steel plant and railroad. During the year 1910 a total of $1,715,517.70 was expended on these properties. It is expected that further construction will be prosecuted during 1911. The plant as proposed will include the following producing departments: Two blast furnaces, 7 open-hearth steel furnaces, one 40-inch blooming mill, one 28-inch and 18-inch rail and bar mill, 16-inch, 12-inch, and 8-inch merchant mill, and by-product coke plant of 90 ovens, together with the necessary complement of auxiliary departments, such as power plants, pumping stations, machine and other shops, etc.

This Duluth steel plant is owned by a subsidiary corporation formed for the purpose, the Minnesota Steel Company, with an authorized capital stock of $1,000,000 owned by the Federal Steel Company.

PORTLAND CEMENT BUSINESS.—The Portland cement business of the Steel Corporation has been very greatly extended. The manufacture of Portland cement as a by-product from blast-furnace slag had been prosecuted in a modest way by the Illinois Steel Company by the time the Steel Corporation was organized. The company's production rapidly increased, exceeding 1,700,000 barrels in 1905 as against 260,000 barrels in 1901.

This development of the cement business led to the organization on October 1, 1906, of a new subsidiary company, the Universal Portland Cement Company, which took over the plants previously owned by the Illinois Steel Company, including a new plant at Buffington, Ind., and which also commenced the construction of additional works at Universal, Pa., and elsewhere, with the result that in 1910 the Corporation's output had increased to over 7,000,000 barrels. The capacity at the close of 1910, including that of new works under way, was given in the annual report of the Corporation for that year at 12,000,000 barrels yearly.

It may be noted that this development of the cement business was a logical accompaniment of the steel business, since, on account of the increasing use of concrete construction, there was a very great demand for cement in the erection of buildings and for various other construction operations which also required large quantities of structural steel and merchant bars.

In addition to these conspicuous instances of new construction, the Steel Corporation, of course, made a very great number of extensions and enlargements at different points. Indeed, these scattered instances of enlargement were in the aggregate probably much more important than the few exceptional instances specifically mentioned here.

ADDITIONS TO OTHER PROPERTY.—The company made large additional investments in its transportation properties. As a rule these comprised normal extensions and improvements rather than new undertakings of exceptional interest. Mention may, however, be made of the construction of a branch line by the Duluth, Missabe and Northern from Alborn to Coleraine, Minn., a distance of 53 miles, connecting with the Canisteo and other mines developed on the western end of the Mesabi Range; the construction of the Connellsville Central line in the coal regions, the name of which was afterwards changed to Connellsville and Monongahela Railway; and the construction of the Newburg and South Shore Railway, a comparatively short line, at Cleveland. Considerable additions were made to the equipment of the Steel Corporation's various railroads, and also to its dock facilities at various points on the Lakes. The steamship property of the Corporation also has been greatly added to, not so much in the number of vessels as in the substitution of new vessels of large capacity and most modern equipment for older and smaller vessels acquired in 1901.

Section 11. Plant capacity of United States Steel Corporation.

INCREASES BY ACQUISITIONS AND BY NEW CONSTRUCTION DOWN TO THE CLOSE OF 1910.—An idea of the relative importance of the additions to the manufacturing capacity of the iron and steel plants of the Steel Corporation by the various acquisitions described in this chapter, and new construction, down to the close of 1910 is afforded by the following table, compiled from official figures:

TABLE 29.—ADDITIONS TO MANUFACTURING CAPACITY OF STEEL CORPORATION BY PURCHASE OF COMPETING CONCERNS AND BY NEW CONSTRUCTION, APRIL 1, 1901, TO JANUARY 1, 1911.

[NOTE.—The capacity figures below are based on the assumption that every department will be operated to its maximum capacity during the entire year, subject only to normal shutdowns for ordinary repairs and overhauling. All tonnage figures shown are gross tons. Percentages which are based on original capacity in 1901, were computed by Bureau.]

Product.	Capacity, Apr. 1, 1901.	Additions.								Capacity Jan. 1, 1911.
		By purchase of Union, Clairton, and Shelby Steel Tube companies.[1]		By purchase of T. C., I. and R. R. Co.		By new construction and improvements.		Total additions.		
	Tons.	*Tons.*	*P. ct.*	*Tons.*	*P. ct.*	*Tons.*	*P. ct.*	*Tons.*	*P. ct.*	*Tons.*
Blast-furnace products	7,440,232	1,228,000	16.5	1,000,000	13.4	6,572,468	88.3	8,800,468	118.3	16,240,700
Steel ingots	9,425,408	1,258,400	13.3	500,000	5.3	6,855,192	72.7	8,613,592	91.3	18,039,000
Rolled and other steel and iron products for sale	7,719,022	1,105,429	14.3	400,000	5.2	5,322,885	69.0	6,828,314	88.5	14,547,336
Universal Portland cement	*Barrels.* 450,000	....	......	....	......	*Barrels.* 7,600,000	1,688.9	*Barrels.* 7,600,000	1,688.9	*Barrels.* 8,050,000

[1] Also includes the small capacity added through purchase of Troy Steel Products and Trenton Iron companies. It may be noted that while the Shelby Steel Tube Company has elsewhere been considered as one of the constituent concerns, it is here treated for convenience as a subsequent acquisition.

This table shows at a glance that the additions to plant capacity through the purchase of competing concerns have been greatly overshadowed by those effected through new construction. Thus, the total addition to blast-furnace capacity by the Union, Clairton, Shelby, and Tennessee concerns combined was a little less than 30 per cent of the Corporation's original capacity in April, 1901, whereas the additions through new construction during this period exceeded 88 per cent. Similarly, the additions to steel-ingot capacity (this covering three concerns, the Shelby concern having no steel works) aggregated less than 19 per cent as against an addition of nearly 73 per cent through new construction. The increase in capacity of the rolling mills by these three acquisitions was nearly 20 per cent, whereas the increase due to new construction was 69 per cent.

In addition to these increases in the capacities of iron and steel works proper down to the close of 1910, the Corporation had increased its capacity for the production of cement from 450,000 barrels to over 8,000,000 barrels (not including the capacity of new works under construction).

Section 12. Production and volume of business of the Steel Corporation, 1901–1910.

The actual production of the Steel Corporation, as distinct from its capacity, for the entire period 1901–1910, is given in Table 30.[1]

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[1] The relation of the Corporation's production to the country's total is discussed in Chapter IX.

TABLE 30.—COMPARATIVE STATEMENT OF PRODUCTION OF UNITED STATES STEEL CORPORATION, 1901–1910.

[Figures are for gross tons except for coke, which are net tons.]

Products	[1] 1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	Increase, 1901–1910.	
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Per cent.*
Iron ore mined:												
In Lake Superior region—												
Marquette Range	1,340,035	1,487,370	1,412,402	934,512	1,359,722	1,442,290	1,170,496	830,087	899,002	830,094	[2] 509,941	[2] 38.05
Menominee Range	2,090,976	2,675,754	2,106,443	1,186,104	1,871,979	1,874,680	1,625,358	1,021,598	1,359,415	1,384,465	[2] 706,511	[2] 33.79
Gogebic Range	1,665,140	2,064,492	1,[illegible]67,856	1,271,831	1,671,747	1,465,375	1,425,457	1,078,025	1,312,701	1,801,480	136,340	8.19
Vermilion Range	1,805,997	2,057,537	1,918,584	1,056,430	1,578,626	1,794,186	1,724,217	927,206	1,066,474	1,338,110	[2] 467,887	[2] 25.91
Mesabi Range	6,121,607	7,778,026	8,058,070	6,054,210	12,004,482	14,068,617	16,458,273	11,272,397	16,968,592	17,910,366	11,788,759	192.58
In Southern ore region—Tennessee Coal, Iron and Railroad Company's mines	.....	.....	.....	.....	.....	.....	.....	1,533,402	1,824,863	1,981,301	1,981,301	.....
Total	13,023,755	16,063,179	15,363,355	10,503,087	18,486,556	20,645,148	22,403,801	16,662,715	23,431,047	25,245,816	12,222,061	93.84
Coke manufactured:												
Beehive ovens	8,967,969	9,521,567	8,639,471	8,539,171	11,930,157	12,899,753	12,716,013	7,591,062	11,896,211	11,641,105	2,673,136	29.81
By-product ovens	.....	.....	18,920	113,122	312,752	395,322	828,751	578,869	1,693,901	2,008,473	2,008,473	.....
Total	8,967,969	9,521,567	8,658,391	8,652,293	12,242,909	13,295,075	13,544,764	8,169,931	13,590,112	13,649,578	4,681,609	52.20
Coal mined, not including that used in making coke	963,326	709,367	1,120,733	1,998,000	2,204,950	1,912,444	1,841,259	3,008,810	3,089,021	4,850,111	3,886,785	403.48
Limestone quarried	1,388,941	1,476,289	1,435,439	1,549,129	2,348,912	2,737,375	3,926,879	3,041,579	4,715,708	5,005,087	3,616,146	260.35
Blast-furnace products:												
Pig iron	6,662,862	7,802,812	7,123,053	7,210,248	9,940,799	11,058,526	10,631,620	6,810,831	11,436,570	11,645,510	4,982,648	74.78
Spiegel	132,940	128,265	121,779	100,025	158,071	150,044	130,554	74,716	80,942	102,260	[2] 30,680	[2] 23.08
Ferromanganese and silicon	59,929	44,453	34,409	59,148	73,278	58,807	57,794	48,861	100,838	83,628	23,699	39.54
Total	6,855,731	7,975,530	7,279,241	7,369,421	10,172,148	11,267,377	10,819,968	6,934,408	11,618,350	11,831,398	4,975,667	72.58

Steel-ingot production:												
Bessemer ingots	6,109,306	6,759,210	6,191,660	5,427,979	7,379,188	8,072,655	7,556,460	4,055,275	5,846,300	5,796,223	[2] 313,083	[2] 5.12
Open-hearth ingots	2,745,514	2,984,708	2,976,300	2,978,399	4,616,051	5,438,494	5,543,088	3,783,438	7,508,889	8,383,146	5,637,632	205.34
Total	8,854,820	9,743,918	9,167,960	8,406,378	11,995,239	13,511,149	13,099,548	7,838,713	13,355,189	14,179,369	5,324,549	60.13
Rolled and other finished steel products for sale:												
Steel rails	1,652,517	1,920,786	1,934,315	1,242,646	1,727,055	1,982,042	1,733,814	1,050,389	1,719,486	2,118,473	465,956	28.20
Blooms, billets, slabs, sheet and tin plate bars	1,068,522	782,637	493,292	932,029	1,253,682	1,096,727	758,699	551,106	675,614	682,364	[2] 386,158	[2] 36.14
Plates	567,357	649,541	519,713	404,422	780,717	836,399	877,682	312,470	729,790	929,020	361,663	63.74
Heavy structural shapes	....	....	362,765	313,779	484,048	620,823	587,954	313,733	614,971	656,797	1,159,266	113.10
Merchant steel, skelp, hoops, bands, and cotton ties	1,025,037	1,254,560	634,830	577,384	982,782	1,240,548	1,316,387	577,591	1,290,467	1,527,506		
Tubing and pipe	583,504	664,341	710,555	710,765	911,346	1,025,913	1,174,629	654,428	1,013,071	868,550	285,046	48.85
Rods	94,145	109,330	101,699	84,934	84,049	111,488	126,095	93,406	139,149	133,722	39,577	42.04
Wire and products of wire	1,048,661	1,122,809	1,126,605	1,226,610	1,283,943	1,399,717	1,481,226	1,275,785	1,607,689	1,490,318	441,657	42.12
Sheets—black, galvanized, and tin plate	696,784	699,621	763,670	735,482	924,439	1,112,542	1,070,752	770,321	1,024,985	1,082,787	386,003	55.40
Finished structural work	411,948	481,029	469,692	357,488	404,732	643,622	719,887	403,832	530,766	589,228	177,280	43.03
Angle and splice bars and other rail joints	154,165	139,954	138,709	72,470	150,265	176,730	195,157	84,669	190,226	235,998	153,159	99.34
Spikes, bolts, nuts, and rivets	....	42,984	53,259	46,003	61,496	70,233	67,991	40,252	71,881	71,326		
Axles	99,800	136,787	119,716	62,981	149,596	181,913	189,006	24,057	68,366	101,066	1,266	1.27
Steel car wheels	....	....	....	....	....	....	....	7,223	67,985	98,105	98,105	....
Sundry steel and iron products	24,040	29,177	30,059	25,787	28,236	79,736	77,463	47,670	115,214	148,735	124,695	518.70
Total	7,426,480	8,033,556	7,458,879	6,792,780	9,226,386	10,578,433	10,376,742	6,206,932	9,859,660	10,733,995	3,307,515	44.54
Spelter	22,989	23,982	23,841	29,983	29,781	28,884	31,454	28,057	27,853	26,777	3,788	16.48
Sulphate of iron	11,936	14,224	15,407	15,805	20,040	21,933	24,540	26,411	33,582	33,684	21,748	182.21
	Barrels.	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	
Universal Portland cement	261,712	486,357	644,286	539,951	1,735,343	2,076,000	2,129,700	4,535,300	5,786,000	7,001,500	6,739,788	2,575.27

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[1] The 1901 figures, which were furnished directly by the Corporation, cover the production of the subsidiary companies for the full year and not merely for the nine months April to December. Most of the figures were taken from the annual reports, subject to some revisions made by the Corporation.

[2] Decrease.

It is apparent, therefore, that there has been a very great expansion of the production of the Steel Corporation in practically every important department. Thus, in the case of ore the total production increased from 13,023,755 tons in 1901 to 25,245,816 tons in 1910, the highest for any year.

The increase in coke production was from 8,967,969 tons in 1901 to 13,649,578 tons in 1910, the production of the latter year, as in the case of ore, being the high-record figure.

The production of pig iron (not including spiegel, ferromanganese, etc.) increased from 6,662,862 tons to 11,645,510 tons, the 1910 figures again being the highest yet recorded, although in 1906 and 1909 the production exceeded 11,000,000 tons.

The production of steel ingots increased from 8,854,820 tons in 1901 to 14,179,369 tons in 1910, the production of the latter year being well in excess of the previous high-record figure (reached in 1906). It is important to call attention in this connection to the very great increase in the production of open-hearth steel, which rose from slightly less than 2,750,000 tons in 1901 to over 8,380,000 tons in 1910. The production of Bessemer steel, on the other hand, shows an absolute decrease during this period, from 6,109,306, in 1901, to 5,796,223 tons in 1910. These figures well illustrate the transition that took place in the steel industry in this respect.

The percentage increases in the Corporation's production of the raw materials and in the primary products for the period 1901–1910, given in Table 30, compare as follows:

Iron ore	93.8	Pig iron	74.8
Coke	52.2	Ingots	60.1

With respect to finished rolled products for sale the increase in production has been much less marked, the actual increase being from 7,426,480 tons in 1901 to 10,733,995 tons in 1910, a gain of 3,307,515 tons, or 44.5 per cent.

Taking up these finished products in detail it will be seen that the output of steel rails in 1910 exceeded 2,100,000 tons as against a previous high-record figure (in 1906) of 1,982,000 tons. The 1910 figures include the production of both the new Gary plant and of the Tennessee Coal, Iron and Railroad Company.

It will be noted that the Corporation's output of tubing and pipe in 1910 was considerably smaller than the output of several preceding years. There was also some reduction in wire and wire products in 1910 as compared with the output in 1909. These decreases are apparently in part attributable to the increase in competition in these departments.

The great increase in the production of Portland cement has already been commented upon. It may be noted again that the production of 1910 of 7,000,000 barrels was very much less than the capacity of the Corporation's plants for this product, including new construction in progress at the close of 1910.

The ten-year period 1901–1910, while on the whole a distinctly prosperous one, included two years of marked depression, namely, 1904 and 1908. In these years there were pronounced declines in the Steel Corporation's output. The reaction of 1904 was especially reflected in the production of ore and finished steel; the production of pig iron in that year, on the other hand, showed a slight increase. The depression of 1908 was reflected in the figures of output in practically every important product except cement. Thus, the output of ore decreased over 5,700,000 tons; that of coke over 5,300,000 tons, while the pig-iron output fell off 3,800,000 tons; that of steel ingots by more than 5,200,000 tons, and finished steel production by more than 4,100,000 tons; moreover, these large decreases were shown in spite of the fact that the considerable production of the Tennessee Coal, Iron and Railroad Company was included in 1908 for the first time. The year 1909, it may be noted, however, brought a recovery in all the raw and crude products above the large production of 1907. The output of finished rolled products in 1909, however, was somewhat under the 1907 figures.

These comparisons illustrate the abrupt changes which characterize the iron and steel industry.

IV. PRESENT ORGANIZATION OF STEEL CORPORATION.

Section 13. Reorganization and coordination of the various constituent properties.

In connection with the various acquisitions and extensions described in this chapter, the Steel Corporation undertook a rather comprehensive rearrangement of its principal subsidiary concerns so as to place those plants manufacturing similar products, or those companies owning the same kind of property, under the control of certain principal constituent concerns. This rearrangement obviously tended to facilitate a more efficient and economical operation of these properties. A particular advantage was the reduction in the number of high-salaried officials. As this rearrangement was generally accompanied by a considerable reduction in the capitalization of the subsidiary concerns, there was also some saving in taxes on capital stock.

MERGER OF OLD CARNEGIE, NATIONAL STEEL, AND AMERICAN STEEL HOOP COMPANIES.—One of the most important of these rearrangements was the merger, on April 1, 1903, of the Carnegie Company of New Jersey, the National Steel Company, and the American Steel Hoop Company under the New Jersey charter of the National Steel Company, the name being changed, however, to Carnegie Steel

Company. The capital stocks of the three older concerns aggregated $252,000,000, as follows:

Carnegie Company	$160,000,000
National Steel Company	59,000,000
American Steel Hoop Company	33,000,000
Total	252,000,000

The capital stock of the new Carnegie Steel Company, however, was fixed at $63,000,000, or exactly one-quarter the total for the three older concerns combined. Apparently this capitalization was determined upon without reference to the value of the properties, but with a view to having a convenient basis for the exchange of the stocks of the three constituent companies. The reduction in capitalization permitted a considerable saving in annual taxes and in fees. The principal object of the consolidation, however, was to secure economies of management by reducing the number of high-salaried officials and by the simplification of accounts. Moreover, as above suggested, there was a practical advantage in having all of these concerns directed from a single source. The Carnegie Company and the National Steel Company, as already shown in this report, were large producers of pig iron and steel billets and other heavy steel products. The Carnegie Company, moreover, produced merchant bars and other products similar to those made by the American Steel Hoop Company. Most of the plants of the Steel Hoop company, it may be noted, were conveniently located in relation to the plants of the National Steel Company and the Carnegie concern, so that the consolidation resulted in very substantial advantages from an operating standpoint.

The plants of the old National Steel and American Steel Hoop companies are owned in fee by the Carnegie Steel Company of New Jersey. The old Carnegie plants are owned by the Carnegie Steel Company of Pennsylvania. (See Exhibit 7, p. 407.)

Merger of coke properties.—On the same date (April 1, 1903) the coke properties of the various subsidiary concerns of the Corporation were transferred to the H. C. Frick Coke Company, the capital stock of which was increased from $10,000,000 to $20,000,000. There had previously been some unification of the coke properties, but prior to this date the Steel Corporation had maintained several other subsidiary coke concerns, namely, the Southwest Connellsville Coke Company, which held the coke property of the Federal Steel Company; the American Coke Company, the coke concern of the American Steel and Wire Company; the Continental Coke Company, owning the similar properties of the National Steel Company; and the United Coal and Coke Company and the McClure Coke Company. These subsidiaries had virtually been managed through the H. C. Frick

Coke Company, but their formal transfer to that concern resulted in distinct advantages from an operating standpoint.

MERGER OF SHEET STEEL AND TIN PLATE COMPANIES.—On December 31, 1903, a further intercompany consolidation was effected through the purchase by the American Sheet Steel Company of all the property of the American Tin Plate Company. The name of the Sheet Steel company was changed to the American Sheet and Tin Plate Company. The capitalization of the Sheet Steel company was retained unchanged, but that of the American Tin Plate Company was reduced from $46,325,000 to the nominal figure of $25,000. The consolidation of these companies permitted much better coordination of sheet and tin-plate mills than was possible under their separate operation.

CONSOLIDATION OF TUBE WORKS.—Another similar instance of intercompany rearrangements was the placing of the plants of the Lorain Steel Company (at Lorain, Ohio, where a large tube plant was added) under the control of the National Tube Company.

MERGER OF ORE PROPERTIES.—In 1904 all the various ore properties of the Steel Corporation were placed under the active control of the Oliver Iron Mining Company.

LEASE OF UNION STEEL PROPERTIES.—Another intercompany rearrangement was the lease of the various properties of the Union Steel Company to other subsidiary concerns of the Corporation. Thus, the blast furnaces and the steel works were leased to the Carnegie Steel Company; the wire plants to the American Steel and Wire Company. The organization of the Union Steel Company was preserved, however, and the revenue from these leases went into its treasury. The arrangement, however, relieved the Union Steel Company from the direct operation of these plants, and thus effected a substantial saving in salaries and other expenses, while further contributing to the systematization of the operation of the various properties.

ORGANIZATION OF EXPORT DEPARTMENT BY THE STEEL CORPORATION.—For some time after the organization of the Steel Corporation, each subsidiary company which had occasion to engage in export trade conducted its sales independently of the others. In the latter part of September, 1903, however, the United States Steel Products Export Company[1] was formed to look after the foreign trade of all the various subsidiary companies of the Steel Corporation. The new company acts as selling agent in the foreign trade for all the subsidiary concerns of the Steel Corporation. This organization of a special company was the result of an intention on the part of the Steel Corporation to develop the export trade more thoroughly. As a matter of fact, there was a marked increase in export business in 1904; this, however, was partly attributable to the depressed condition of the domestic market in that year, which naturally led to a more serious consideration of the possibilities of foreign markets. With the return of greater prosperity in the home market, the export business fell off somewhat.

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[1] The name was in 1910 changed to United States Steel Products Company. The company has a capital stock of $1,000,000 and is a subsidiary of the Federal Steel Company.

CREATION OF NEW SUBSIDIARIES.—As already pointed out, in the construction of its great plant at Gary the Steel Corporation organized a new subsidiary concern, the Indiana Steel Company, and similarly, in the case of its works at Duluth, it formed a local corporation, the Minnesota Steel Company. It also organized in 1907 the Great Western Mining Company to manage the ore properties controlled under the Hill lease. (See p. 260.) The incorporation of the Universal Portland Cement Company may also be mentioned in this connection. This creation of new subsidiary concerns is in line with the character of the Steel Corporation as a holding company.[1]

Section 14. Constituent concerns of Steel Corporation on July 1, 1911.

As a result of these various rearrangements and new acquisitions, the list of principal constituent concerns of the Corporation, the stocks of which were directly held by it on July 1, 1911, was as follows:

TABLE 31.—CONSTITUENT CONCERNS OF THE UNITED STATES STEEL CORPORATION WHOSE STOCKS WERE DIRECTLY HELD BY IT JULY 1, 1911.

Company.	Class of stock.	Total outstanding capital stock.	Amount owned by United States Steel Corporation.
Carnegie Steel Company of New Jersey		$65,250,000.00	$65,250,000.00
Federal Steel Company	Common	46,484,300.00	46,484,300.00
	Preferred	53,260,900.00	53,260,900.00
American Steel and Wire Company of New Jersey	Common	50,000,000.00	49,989,400.00
	Preferred	40,000,000.00	39,999,000.00
National Tube Company	Common	40,000,000.00	40,000,000.00
	Preferred	40,000,000.00	40,000,000.00
American Sheet and Tin Plate Company	Common	24,500,000.00	24,499,600.00
	Preferred	24,500,000.00	24,499,600.00
American Bridge Company, New Jersey		10,000,000.00	10,000,000.00
Shelby Steel Tube Company	Common	8,151,500.00	8,151,500.00
	Preferred	5,000,000.00	5,000,000.00
Lake Superior Consolidated Iron Mines		29,887,448.97	29,887,448.97
Pittsburg Steamship Company		7,880,000.00	[1] 221,700.00
Union Steel Company		20,000,000.00	20,000,000.00
Clairton Steel Company		3,500,000.00	3,500,000.00
Tennessee Coal, Iron and Railroad Company	Common	32,529,997.50	32,442,795.00
	Preferred	124,500.00	
	Guaranteed preferred.	178,600.00	

[1] The balance of the capital stock of Pittsburg Steamship Company ($7,658,300) is owned by Carnegie Steel Company.

It should be understood that the companies given in this list are simply the constituent concerns whose stocks are directly held by the

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[1] The stocks of all these new subsidiaries are owned by some of the constituent companies of the Corporation and not by the Corporation itself.

Steel Corporation, and that these constituent concerns, in turn, have a large number of subsidiary corporations, in addition to fee properties. A statement of the subsidiary companies of these constituent concerns is given in Exhibit 7, on page 407.

Several of these constituent companies, as well as many of their subsidiaries, had a large amount of indebtedness which is not here shown. A considerable part of this indebtedness was owned within the organization.

The Carnegie Steel Company, as already shown, was a merger of the old Carnegie Company of New Jersey, the National Steel Company, and the American Steel Hoop Company. The aggregate capital stock of these companies at that time was $252,000,000, whereas in the merger the capital stock was first fixed at $63,000,000. As a result of this reduction, the consolidated company entered surplus on its books to the amount of the capital stock thus extinguished, or $189,000,000.

The Carnegie Steel Company (the present company) subsequently increased its capital stock by $2,250,000, or, as the above table shows, to $65,250,000.

In the merger of the American Sheet Steel Company and American Tin Plate Company, as above shown, the capitalization of the old American Sheet Steel Company was continued unchanged, and that company entered on its books a surplus of $46,325,000, this being equal to the entire outstanding stock of the American Tin Plate Company.

The table shows that the present capitalization of the American Bridge Company of New Jersey is $10,000,000. This is a reduction of $52,324,600 from the previous capitalization. This amount, therefore, as in the case of the American Tin Plate and Carnegie companies, was written into the surplus account of the company.

These are the only instances of reductions in capital stock. It may be noted that the Union Steel Company's stock is $20,000,000. Most of the properties of this concern, as already stated, are operated by constituent or subsidiary companies of the Corporation. The stock of the Lake Superior Consolidated Iron Mines has been increased by $462,508 since the Steel Corporation was organized, this amount representing the treasury stock issued since the acquisition of the company by the Steel Corporation. The issued stock of the Pittsburg Steamship Company, which in 1901 was $1,330,000, has been increased to $7,880,000.

The one-sixth interest in the stock of the Oliver Iron Mining Company, which was subsequently acquired in 1901 (see p. 106), does not appear in this list for the reason that this fraction was transferred to the Carnegie Steel Company, which, therefore, now owns the entire stock of the Oliver concern.

CHAPTER VI.

ADDITIONS TO INVESTMENT OF UNITED STATES STEEL CORPORATION SINCE 1901.

Section 1. Introductory.

The valuation of $682,000,000 for the tangible property of the Steel Corporation at its organization in 1901, as computed in Chapter III, may fairly be regarded as substantially the *investment* in such tangible property of the Corporation at that time, reduced to a cash basis. In order to obtain an estimate of the investment in such tangible property of the Corporation at the present time, it is necessary to ascertain the actual cost of the net additions since the company's organization. These additions, as shown in the preceding chapter, have been made in two ways—first, through new construction and through other additions directly from earnings or from capital otherwise provided; and, second, through the acquisition of competing concerns. By combining the cost of these various additions to the property (after certain allowances for depreciation; see pp. 292–309) with the original investment in the property in 1901, as already computed, an approximate total of the actual *investment* in the physical property of the Corporation at the present time is obtained. The *value* of such property, and especially of the natural resources, is referred to later. For the purposes of the present discussion, however, and of judging the reasonableness of the profits of the Corporation, which are discussed in Chapter VII, a statement of the actual investment in, rather than the value of, its property is essential.

It should be pointed out that in addition to the tangible properties of the Steel Corporation, its intangible assets have a value. Indeed, the very merging and coordinating of the various tangible properties of the Corporation imparts to them collectively a value somewhat in excess of the sum of the values of their tangible assets alone. The Corporation, in fact, contends that this "merger value," as it may be termed, is a very important factor in its total assets. Since, however, this merger value must be partly due to the restriction or elimination of competition, and since the portion thus created can not be segregated from that due to the introduction of economies, it is impracticable in this discussion to make any quantitative allowance for merger value of any sort whatever. A brief consideration of this and similar factors is, however, taken up later. (See p. 326.)

There will first be considered here the additions directly made from earnings, or from new capital, and then the cost of additions made through acquisitions of other concerns.

Section 2. Cost of additions to Steel Corporation's property other than by purchase of competing concerns, 1901 to 1910, by classes.

The Steel Corporation in its annual reports gives a summary of those direct additions to fixed property for each year which are charged to capital account. This summary classifies such expenditures by the following kinds of property: Manufacturing, ore, coal and coke, transportation, miscellaneous.

In order to arrive at a statement of the total additions to the assets of the Corporation, account must, of course, be taken of the increase in other assets as well. These remaining assets are grouped in the balance sheets of the Corporation under the following heads: (1) Deferred charges to operations, representing chiefly advanced mining royalties; (2) investments; (3) sinking and reserve fund assets; (4) current assets, this including, in addition to the ordinary quick assets and inventories, sundry securities.

In the following table are given the yearly additions to the fixed property of the Corporation[1] (other than the original cost of the Union Steel Company, the Clairton Steel Company, and the Tennessee Coal, Iron and Railroad Company), together with the annual increases in its other assets, for the period from April 1, 1901, to December 31, 1910. For convenience in later discussion (see pp. 313–323) the total additions for the period 1901–1907 are also given.

It should be kept in mind that the additions to fixed property given in this table are gross amounts. Account must also be taken of the depreciation and exhaustion of the Corporation's properties during this interval. This matter is one of considerable intricacy. It is taken up in sections 5 and 6 of this chapter.

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[1] The additions to fixed property given in Table 32 are substantially identical with the figures given in the published reports of the Corporation. In a few cases, however, they differ, either as to the distribution of certain items which in the annual reports are given in a lump sum, or because of certain revisions made subsequent to their original publication.

TABLE 32.—ADDITIONS TO FIXED PROPERTY OF UNITED STATES STEEL CORPORATION THROUGH CAPITAL EXPENDITURES (EXCLUSIVE OF ORIGINAL COST OF UNION STEEL, CLAIRTON STEEL, AND TENNESSEE COAL, IRON AND RAILROAD COMPANIES), AND INCREASES IN OTHER ASSETS, 1901–1910.

[For certain adjustments on account of depreciation, see Tables 37 and 38. Italics indicate decreases.]

Class of property.	1901 (9 months).	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	Total, 1901–1907.	Total, 1901–1910.
Fixed property assets:												
Manufacturing properties[1]	$9,337,599	$9,972,514	$20,808,575	$12,191,596	$8,564,139	$12,895,066	$23,249,437	$14,480,566	$7,413,543	$11,316,379	$97,018,926	$130,229,414
Gary plant						4,720,159	19,343,229	18,733,841	11,108,615	16,072,851	24,063,388	69,978,695
Tennessee Coal, Iron and Railroad Company							984,887	3,460,993	3,174,350	3,887,079	984,887	11,507,309
Iron ore properties[2]	3,361,116	2,147,308	2,067,959	2,056,275	3,249,825	5,583,650	10,429,838	8,743,513	7,774,229	7,035,644	28,895,971	52,449,357
Coal and coke properties	1,175,164	2,043,169	4,047,879	1,490,502	4,178,986	1,089,379	4,093,284	1,938,402	4,085,886	2,499,887	18,118,363	26,642,538
Transportation properties	2,375,175	2,988,926	5,046,484	2,692,326	8,184,127	10,436,125	15,105,336	8,163,127	4,901,849	12,549,929	46,828,499	72,443,404
Miscellaneous fixed properties	659,433	*142,346*	746,960	265,034	1,949,477	344,782	181,308	315,898	153,772	497,045	4,004,648	4,971,363
Sundry adjustments[3]	*228,103*	691,496	237,502	*28,921*	646,213	84,823	614,723	*114,843*	*48,066*	1,208,770	2,017,733	3,063,594
Total fixed properties	16,680,384	17,701,067	[4]32,955,359	18,666,812	26,772,767	35,153,984	74,002,042	55,721,497	38,564,178	55,067,584	221,932,415	371,285,674
Assets other than fixed property:												
Deferred charges to operations[5]	*550,571*	*104,065*	543,655	263,693	756,984	1,074,899	1,932,112	2,901,932	3,656,525	2,568,514	4,116,707	13,243,678
Investments[6]	3,630,924	*1,997,082*	537,277	*491,978*	*739,833*	437,008	99,769	1,365,880	*729,890*	16,284	1,476,090	2,128,364
Sinking and reserve fund assets	245,080	1,143,543	2,218,586	3,351,001	9,778,104	10,707,392	4,998,457	*9,179,367*	*1,524,082*	*5,671,048*	32,442,163	16,067,666
Net current assets[7]	3,886,455	26,897,361	11,062,345	*13,299,764*	29,110,576	31,014,835	6,451,586	*33,157,160*	33,683,118	6,034,192	95,123,394	101,683,544
Total assets, other than fixed property	7,411,888	25,939,757	14,361,863	*10,177,043*	38,905,831	43,234,134	13,481,924	*38,068,715*	35,085,671	2,947,942	133,158,354	133,123,252

[1] Exclusive of Gary plant and the building of the city of Gary and terminal railroad work connected therewith, and expenditures on Tennessee Coal, Iron and Railroad Company's properties.

[2] Includes unabsorbed expenditures for stripping and development at mines which, while capitalized temporarily, are gradually absorbed in operating cost.

[3] Adjustments in sundry accounts not distributed by classes of property.

[4] In this year expenditures of $8,421,189 upon the Union Steel Company properties, not classified in the annual report for that year, have been properly distributed by classes.

[5] The Bureau excluded expenditures for stripping and development at mines which in the company's accounts were included under this head down to December 31, 1906. Such expenditures for stripping and development at mines are in this table included in all years under iron-ore properties. The "Deferred charges to operations," therefore, include chiefly advanced mining royalties.

[6] Outside real estate and investments in sundry securities, including real-estate mortgages and land-sale contracts. In the annual reports of December 31, 1902, and December 31, 1903, insurance fund and depreciation fund assets are included under this caption, whereas in the above table these amounts appear under "Sinking and reserve fund assets."

[7] Sundry real-estate mortgages and purchase-money obligations have not been deducted from the gross current assets in establishing these net figures. (See p. 201.)

Section 3. Cost of properties acquired through purchase of competing concerns.

The additions to fixed property, as above stated, do not include the original cost of the fixed properties of the Union, Clairton, and Tennessee Coal, Iron and Railroad companies, although they do include the subsequent capital expenditures upon these properties. In order to obtain a grand total of the additions to the property account of the Steel Corporation since its organization, therefore, it is necessary to add to these classified totals shown in the preceding table the original investment of the Corporation in the fixed properties of the three concerns named. The current assets of these concerns are included in the totals already given, since the Bureau's statement of such assets is made up directly from balance sheets of the Steel Corporation.

The Steel Corporation acquired a few other small concerns, such as the Troy Steel Products Company and the Trenton Iron Company. The cost of these acquisitions, however, is included in the yearly totals of capital expenditures given in Table 32, so that these minor purchases need not be considered separately.

In the case of the Union and Clairton steel companies, a distribution of the original cost by the principal classes of property was made by the Steel Corporation itself, as noted below. No such distribution, however, was made in the case of the Tennessee Coal, Iron and Railroad Company, and no classification need be made at the moment, since in the official estimate by the Steel Corporation of the value of its property at the close of 1907, already referred to, the property of the Tennessee concern is not so classified.

The cost of these three concerns may now be briefly analyzed.

Cost of Union-Sharon steel properties.—In payment for the Union Steel Company (which, it will be recalled, had just absorbed the Sharon Steel Company; see p. 252), the United States Steel Corporation guaranteed an issue of $45,000,000 of Union Steel Company bonds. Of this total, $29,113,500 were issued at the time for the property, $8,512,500 were sold to the vendors to be paid for in cash at par under the agreement, while $3,500,000 were reserved to retire bonds outstanding against the Sharon properties, and $3,874,000 were reserved for future construction and improvements.

The aggregate cost of the fixed properties was stated by the Corporation at $30,860,501. Payment was made in the following manner.

Bonds of the Union Steel Company (guaranteed by the United States Steel Corporation)	$29, 113, 500
Underlying bonds assumed	3, 591, 000
Cash	497, 990
Total	33, 202, 490
Less liquid assets acquired	2, 341, 989
Total cost fixed properties	[1] 30, 860, 501

This total was allotted by the Corporation among the different classes of property acquired, as follows:

Manufacturing properties	$14, 832, 875
Coal and coke	6, 104, 207
Ore	8, 550, 607
Transportation	1, 004, 463
Miscellaneous	368, 349
Total	30, 860, 501

The following is an excerpt from an official statement of the Corporation regarding the transaction:

> The Steel Corporation pay the exact cost of the manufacturing plants, to be determined by auditors appointed for that purpose. For the real estate, ore properties, and the coal lands they will pay something more than the cost value, but not to exceed the present market value. The stockholders of the Union and Sharon plants agree to furnish about $10,000,000 new cash, to be expended in the completion of improvements and further development of the properties in such manner as the Steel Corporation may determine.
>
> The manner of paying for the property will be by a bond issue of $45,000,000, secured on the property and the principal and interest guaranteed by the Steel Corporation. For the actual money put into the manufacturing property the stockholders will receive these bonds at par. For the value of real estate, ore, and coal they will receive bonds at par, and for the $10,000,000 of new cash they will receive bonds at par. The remainder of the bonds will be kept in the treasury for use at some future time in such further development of the property as may be decided on by the Steel Corporation.
>
> The sellers' profit in the transaction arises solely from their profit in operating their plants to date, and in the increased value of their ore, coal, and real estate, which were purchased some time ago.

There appears to be no reason to doubt the accuracy of the statement with respect to the manufacturing properties. It seems probable that the investment in these manufacturing plants reached the total of, roughly, $14,800,000, above stated. As previously shown in the discussion of the purchase of this concern, these properties were extensive. The combined blast-furnace capacity was about 2,500 tons daily, and the open-hearth furnace capacity was almost as large, while there was a large variety of finishing departments.

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[1] This total includes the cost of a minority interest in a subsidiary concern of the Sharon Steel Company. This parcel was purchased in 1903 and the cost is included in the additions for that year in Table 32. It is included here for convenience in discussion, but is not duplicated in the final computation. (See Table 33.)

This figure for the manufacturing plants includes the organization and capitalization expenses of the company, together with a little miscellaneous real estate. These items, however, were comparatively unimportant.

The value assigned to transportation property, roughly, $1,000,000, does not appear to be unreasonable. It covered the Mercer Valley Railroad, with 3 miles of main line and 30 miles of sidings about the works, and 2 steamers of 7,000 tons capacity each.

The miscellaneous property included some gas property and scattered real estate and tenements. The total amount assigned these properties is so small that it need not be analyzed.

Therefore, except for the values assigned ore, coal, and coke property, it appears that these figures of cost may be accepted as a fairly accurate measure of the value of these Union Steel properties at the time of the transfer.

As shown above, the coal and coke property went in at a total consideration of $6,104,207, and the ore property at $8,550,607. There can be no doubt that these valuations were excessive.

The coal properties, with the price paid by the Steel Corporation for each principal parcel were as follows:

Sharon Coke Company: 1,448 acres of coal land and about 300 acres of surface fronting on the Monongahela River west of Lecrone	$1,388,964.66
Republic Coal Company: Tract between Buffington and Brownsville, containing 3,222 acres of coal and 511 acres of surface land	2,880,000.00
River Coal Company: 1,524 acres of coal and 179 acres of surface land near the Monongahela River, above Brownsville	720,000.00
Total	4,988,964.66

The difference between the amount paid for these coal lands and the total consideration given on page 283 represented the value of coke ovens, equipment, etc.

If the surface holdings alone are taken at an average of $80 per acre, which appears to be sufficient, the value of the coal, per acre, in these three tracts would be, respectively, about $943, $881, and $463, or an average of $793 for the 6,194 acres contained in all. The river coal is spoken of as steam coal, but there was a possibility of coking it; the other is coking coal and probably the best which was obtainable at the time it was purchased by the Union and Sharon interests, but does not rank so high as that in the Connellsville basin proper.

The highest ascertained price for coking-coal land in this general territory up to that time was $500 per acre for 3,000 acres purchased by the Clairton Steel interests in November, 1902. The average price in this and two other fairly large purchases about this time was almost exactly $560 per acre, or $233 per acre less than the average price paid by the Steel Corporation for the three parcels above described. As these latter comprised, altogether, practically 6,200 acres, the excess paid by the Steel Corporation over the average price paid in the three other transactions mentioned amounted, in round numbers, to $1,450,000. This amount may be considered as indicating, in a rough way, the excessive valuation placed on these properties in this transaction, since the other purchases above noted were made at just about the same time. This amount, however, would not represent the entire profit of the Union-Sharon interests on this coal property, since they probably acquired most of it at much less than $560 per acre.

The total consideration of $8,550,607 for the ore property was allotted as follows:

Sharon mine and equipment	$4, 400, 040
Property of Donora Mining Company	4, 150, 567
Total	8, 550, 607

There can be little doubt that these valuations were very liberal. Allowing $550,607 to cover improvements and equipment—which amount probably is about correct—it may be considered that the ore itself (subject, in the case of some of the mines of the Donora Mining Company, to a royalty) cost $4,000,000 for each parcel. In the annual report of the Steel Corporation for 1902 the total tonnage of ore covered by this purchase was given at approximately 40,000,000 tons. This (see p. 214) agreed substantially with estimates current in the trade which placed the tonnage of the Sharon mine at 21,000,000 tons, and that of the Donora mining properties at about 20,000,000 tons. The Sharon mine was purchased in fee. On an estimate of, say, 20,000,000 tons for this mine the cost of the ore would have been 20 cents a ton.[1] Such a price, in cash, for a fee, was far greater than the average of fee prices for such properties. As already shown on page 208, a committee of mining interests stated in a brief to the Minnesota legislature as late as 1908 that the highest price which they had known to have been paid for ore in fee was 15 cents a ton.

If all of the estimated tonnage of the Donora Mining Company properties (20,000,000 tons) had been owned in fee, the price paid for these would have been almost exactly the same per ton as in the case of the Sharon mine. Two important mines of the Donora Mining Company, however, were leaseholds, and the equity of the lessee in such ore holdings was worth much less than the interest of the owner of the fee. This gives added force to the other indications of overvaluation.

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[1] The slight difference between these averages and those given on page 214 is due to the fact that the former included improvements.

It will be recalled that the official announcement issued by the Steel Corporation stated that while the manufacturing properties had been taken over at their actual cost, the ore properties, coal lands, and real estate had been taken over at above the cost, but, it was claimed, at not more than the current market value. The price paid for these properties was very greatly in excess of the original cost to the Union Steel interests. Thus, the Sharon mine, for which the Steel Corporation paid approximately $4,000,000, exclusive of improvements, originally cost the Sharon Steel Company, according to reliable trade reports, only $150,000. Undoubtedly, at the time of its transfer to the Steel Corporation it was worth a very much greater sum, since the amount of ore in the mine proved to be very much larger than that originally estimated. The original cost of the properties of the Donora Mining Company is not definitely known, but it was undoubtedly but a small fraction of the price which was later paid by the Steel Corporation.

There can be no question that the prices paid by the Steel Corporation for both the coal and the iron-ore properties were considerably in excess of a fair valuation at the time of the transfer. The real significance of the transaction seems to be that the Steel Corporation desired to eliminate the competition of certain influential interests back of the Union concern, particularly that of Mr. Frick, and that the amount necessary to induce these owners to retire from such competition was, in effect, charged against the ore and coal. Nevertheless, the amount of this overvaluation, when compared with the enormous value of the assets of the Steel Corporation as a whole is not important, and the Bureau has entered these properties in its computation at the actual cost to the Corporation.

Clairton Steel purchase.—The properties acquired through the purchase of the Clairton Steel Company have already been described in Chapter V. (See pp. 254–255.) The terms of this purchase were given in the annual report of the Steel Corporation for 1904, where it was stated that the Corporation paid to the vendors $1,000,000, par value, in the Corporation's 10–60 year 5 per cent bonds, which had been acquired by it for this purpose in the open market at $813,850, and that in addition the Corporation guaranteed the outstanding bonded indebtedness of the Clairton concern to the extent of $10,230,000, as follows:

Clairton Steel Company 5 per cent mortgage bonds	$5,000,000
St. Clair Furnace Company first-mortgage bonds	2,980,000
St. Clair Steel Company first-mortgage bonds	2,250,000
Total	10,230,000

In addition to these there were outstanding against the properties of the Clairton Steel Company and its subsidiary companies the following bonds and mortgages:

St. Clair Terminal Railroad Company first-mortgage bonds	$1,000,000
Real-estate mortgages	1,666,715
Total	2,666,715

While these latter bonds and mortgages were not guaranteed by the Steel Corporation, they were a lien against important parts of the property acquired by it, and therefore they practically represented an addition to the cost of the acquisition.

In addition to the fixed property, the Corporation acquired with the plants working assets at par to the amount of $2,951,005, making the indicated cost of the fixed properties $10,759,560, as follows:

Steel Corporation 5 per cent bonds ($1,000,000) at cost	$813,850
Bonds of the Clairton Steel Company, St. Clair Furnace Company, St. Clair Steel Company, guaranteed	10,230,000
St. Clair Terminal Railroad Company bonds and real-estate mortgages, not guaranteed	2,666,715
Total	13,710,565
Net working assets	2,951,005
Cost of fixed properties to Steel Corporation	10,759,560

This total cost of the fixed property was distributed by the Corporation as follows:

Manufacturing	$6,915,196.94
Iron ore	1,176,797.81
Coal and coke	1,365,557.95
Transportation	1,093,163.61
Miscellaneous (limestone and town site)	208,844.11
Total cost of fixed property	10,759,560.42

The Bureau has accepted this cost as representing an equivalent addition to the investment of the Steel Corporation. The plants of the Clairton concern had a capacity of about 475,000 tons of pig iron annually and about 400,000 tons of steel. The company had extensive ore properties, over 2,600 acres of desirable coking-coal land, and considerable terminal railroad property. These facts and the further fact that the company was in the hands of receivers at the time of its acquisition suggest that the price paid was not unreasonable. As in the case of the Union properties, the price was in the form of bonds.[1]

TOTAL COST OF FIXED PROPERTY OF UNION AND CLAIRTON COMPANIES.—In the following table the cost of the fixed properties of the Union Steel Company and the Clairton Steel Company are combined. The current assets are not included in this table, for the reason that they have already been included in Table 32, since such total current assets were arrived at by comparing the balance sheets of the Steel Corporation from year to year.

TABLE 33.—COST OF FIXED PROPERTIES OF UNION AND CLAIRTON STEEL COMPANIES TO THE STEEL CORPORATION.

Description.	Union Steel Co.[1]	Clairton Steel Co.	Total.
Manufacturing	$14,335,838	$6,915,197	$21,251,035
Ore	8,467,776	1,176,798	9,644,574
Coal and coke	6,104,207	1,365,558	7,469,765
Transportation	1,004,462	1,093,163	2,097,625
Miscellaneous	368,349	208,844	577,193
Total	30,280,632	10,759,560	41,040,192

[1] The cost of the Union Steel Company property here given excludes an item of $579,869 for a minority interest in a subsidiary concern, that interest not having been acquired until 1903 and being included in the capital expenditures of that year given in Table 32, page 280. This explains the difference between the amounts here given for the manufacturing properties and the ore and those stated on page 283.

PURCHASE OF TROY STEEL PRODUCTS COMPANY AND OTHER SMALL CONCERNS.—Reference has already been made in Chapter V to the acquisition by the Steel Corporation of the Troy Steel Products Company and the Trenton Iron Company. These acquisitions have been taken account of on the books of the Steel Corporation through the additions to fixed property given in Table 32. Since these purchases

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[1] It may be noted that the actual investment made in these Clairton properties by the original owners at the time of the transfer, as computed by the Steel Corporation, was $17,663,287.09, distributed as follows:

Manufacturing plant	$10,294,774.06
Railroad	1,093,163.61
Coal	1,365,557.95
Iron ore	1,749,942.47
Limestone (credit)	*1,891.41*
Town site	210,735.52
Total	14,712,282.20
Net working assets	2,951,004.89
Grand total	17,663,287.09

While this apparently expresses the actual investment in the Clairton properties by the former owners (this amount including additions made only by incurring certain indebtedness, which, however, was assumed by those interests), the Bureau has deemed it proper to consider the value of the investment at the time of transfer as fully represented by the cost to the Steel Corporation.

were made on a cash basis and since they were relatively unimportant, they do not call for detailed analysis or criticism, and both the total cost and the distribution as made by the Steel Corporation have been accepted by the Bureau.

It is worth while, however, to make passing reference to certain circumstances connected with the acquisition of the Troy Steel Products Company, noted on page 256. The price paid for this concern was $1,100,000. The company had been unsuccessful, and, in fact, had been sold under reorganization in August, 1895. John D. Rockefeller and H. H. Rogers, both of whom were at that time directors in the United States Steel Corporation, were interested in the Troy Steel Products Company. It is impossible to say whether their connection with the two concerns had any influence upon the purchase or on the price paid, but it is proper to repeat that the plant had been idle for several years prior to this transfer, and that it was never operated by the Steel Corporation. It should be stated, however, that the stockholders of the Steel Corporation were specifically advised of the connection of these directors with the Troy concern in a notice of a meeting at which this transaction was submitted to them, and that they approved the purchase.

The acquisition of the Trenton Iron Company was such a small matter that it need not be discussed in detail.

COST OF TENNESSEE COAL, IRON AND RAILROAD COMPANY'S PLANTS.—As previously stated, the Steel Corporation in its reports has not distributed the cost of the Tennessee Coal, Iron and Railroad Company by the principal classes of property. Furthermore, in the official estimate of the value of the different kinds of property by the Steel Corporation as of January 1, 1908, given on page 314, the property of this concern is not distributed. No apportionment of this price, therefore, need be made in this discussion. At the moment it may simply be repeated, as shown in Chapter V, that the total cost of the Tennessee Coal, Iron and Railroad Company's fixed property at the date of acquisition on November 1, 1907, as entered in the Steel Corporation's balance sheet of December 31, 1907, was $48,961,208.83. There was expended during the months of November and December, 1907, on construction work on the Tennessee company's properties, $984,886.74, thus making the total cost of the fixed property up to the close of December, 1907, as carried on the Steel Corporation's balance sheet, $49,946,095.57.

The value of this Tennessee company's property has been the subject of much dispute. It has been argued, on the one hand, that the property was worth much less than it cost, and, on the other, that the Steel Corporation acquired this property at what was virtually a forced sale. The stated cost of the fixed property to the Steel

Corporation on November 1, 1907, of $48,961,208.83, was arrived at by the Corporation as follows:

TABLE 34.—ANALYSIS OF COST OF FIXED PROPERTY OF TENNESSEE COAL, IRON AND RAILROAD COMPANY TO UNITED STATES STEEL CORPORATION AS OF NOVEMBER 1, 1907.

	Par value of T. C., I. and R. R. Co. common stock acquired.	10-60 bonds at par delivered in payment thereof.	Par value of bonds directly issued, and cost of bonds purchased, for delivery per preceding; also amount of cash payment made.
For full-paid common-stock certificates	$29,109,515.00	$34,654,000.00	$33,949,282.48
For common stock subscription receipts, 20 per cent paid	632,655.00	753,000.00	735,695.16
Total paid for with bonds	29,742,170.00	35,407,000.00	34,684,977.64
For 20 per cent installment paid Dec. 15, 1907, on subscription receipts	632,655.00		[1] 632,655.00
Total acquired and cost of the same	30,374,825.00	35,407,000.00	35,317,632.64
Less, par of stock acquired			30,374,825.00
Excess cost of stock over par as computed by Steel Corporation			4,942,807.64
Fixed property investment per books of Tennessee Coal, Iron and Railroad as of Oct. 31, 1907, after adjustments and write-offs of $1,181,084.84 by the Steel Corporation			44,037,139.65
Total			48,979,947.29
Less, balance of undivided surplus of Tennessee Coal, Iron and Railroad on Oct. 31, 1907, remaining after the adjustments made by the Steel Corporation			18,738.46
Total cost as per United States Steel Corporation's annual report, 1907			48,961,208.83

[1] Cash.

In explanation of this table it may be noted that the total cost of $48,961,208.83 is the book cost of the Tennessee Coal, Iron and Railroad fixed properties, after certain adjustments made by the Steel Corporation, plus the excess ($4,942,807.64) paid for the stock of that company by the Steel Corporation over its par value. This cost applies only to fixed properties. The excess of $4,942,807.64 is arrived at by counting $30,000,000 of United States Steel bonds directly issued from the Corporation's treasury at their par value, but counting the remaining $5,407,000 delivered in part payment at the actual cost to the Steel Corporation in the open market, namely, $4,684,977.64; a small amount of cash ($632,655) was also paid as part of the total consideration. It should be understood, therefore, that the total cost of $35,317,632.64 for the Tennessee company's stock, as given in this table, is not a cash equivalent price, since the market value of the total bonds delivered in payment for the stock would have been considerably less than $35,317,632.64, the amount here entered, as these bonds at that time were selling at only about 86 per cent of their par value. In fact, at the market value of the bonds issued, the total consideration was almost exactly equal to the par value of the Tennessee company's stock purchased.

The valuation of the fixed property, as per the books of the Tennessee Coal, Iron and Railroad Company, after the adjustments made by the Steel Corporation, was made up as follows:

Plants and equipment	$15,382,233.71
Real estate	26,525,143.93
Birmingham Southern Railroad	1,442,698.11
Land and town-site companies	289,063.90
Potter Ore Company	398,000.00
Total	[1] 44,037,139.65

This book valuation of $15,382,234 for the plants, which does not include the sites, seems rather liberal, and likewise that of $26,525,144 for the real estate, which also covers the extensive mineral lands of the company (except for the Potter Ore Company), seems high. It is true that the mineral resources of the company were enormous, both with respect to ore and coal. However, the vast amount of such resources in this region and the somewhat restricted market demand therefor resulted in a very low market value for them, and it is a very fair question whether these mineral properties and detached real estate of the Tennessee company could have been readily sold for cash for $26,500,000.

The price paid for the stock, as above given, namely, $35,317,633 (chiefly in bonds), indicates an average price of $116 per share. The book value of this stock, as indicated by the balance sheet of October 31, 1907, before the adjustments made by the Steel Corporation, was 104 per cent of its par value. The stock had sold on the New York Stock Exchange for some years at very considerably above these figures. For the two years prior to its sale to the Steel Corporation the average price was about $146 per share. The stock was, however, a very speculative security, so that the market quotations are not a very satisfactory guide. Moreover, the price of the stock would, of course, be influenced by intangible considerations which are not taken account of by the Bureau. Nevertheless, it is fair to consider these market quotations in connection with the discussion of the tangible assets. It appears also that certain of the chief holders of this stock who made the arrangements for exchanging it for Steel Corporation bonds stipulated that all the holders of this stock should have the privilege of exchanging on the same terms; and it also appears that practically all holders of this stock availed themselves of these terms, although some, at least, were under no financial necessity of doing so. It should be kept in mind that the Steel Corporation, by this acquisition, eliminated a competitor of growing importance, and that the price paid may have been swelled on this account.

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[1] It should be observed that this is not the cost to the Steel Corporation.

Taking all the evidence together, it seems probable that while the price paid may have somewhat exceeded a fair valuation of the property the discrepancy would not be of sufficient importance to call for a detailed analysis.

Section 4. Total gross additions to the investment of the Steel Corporation, 1901–1910.

The original cost of the fixed properties of the three concerns above discussed and of the additions made directly, as per Table 32, page 280, are summarized below.

TABLE 35.—TOTAL GROSS ADDITIONS TO PROPERTY OF THE STEEL CORPORATION APRIL 1, 1901, TO DECEMBER 31, 1910.

Class of property.	Additions directly made, as per Table 32 (p. 280).	Cost of Union and Clairton companies, as per Table 33 (p. 288).	Total before allowing for depreciation.
Fixed property (exclusive of Gary and Tennessee Coal, Iron and Railroad Company):			
Manufacturing	$130,229,414	$21,251,035	$151,480,449
Iron ore	52,449,357	9,644,574	62,093,931
Coal and coke	26,642,538	7,469,765	34,112,303
Transportation	72,443,404	2,097,625	74,541,029
Miscellaneous fixed property	4,971,363	577,193	5,548,556
Other assets:			
Deferred charges	13,243,678		13,243,678
Investments	2,128,364		2,128,364
Sinking funds	16,067,666		16,067,666
Net current assets	101,683,544		101,683,544
Total	419,859,328	41,040,192	460,899,520
Gary plant [1]	69,978,695		69,978,695
Tennessee Coal, Iron and Railroad Company [2]	60,468,518		60,468,518
Sundry adjustments [3]	3,063,594		3,063,594
Grand total	553,370,135	41,040,192	594,410,327

[1] Includes city of Gary and railroad property. This is the book cost.

[2] Original cost to Steel Corporation of fixed property plus subsequent additions.

[3] Sundry adjustments not distributed by classes of property.

Section 5. Depreciation allowances of the Steel Corporation.

As already made clear, the additions to the fixed property of the Steel Corporation above given are gross; that is, they do not allow for depreciation (including exhaustion and obsolescence). In order to arrive at the net investment at any given time, therefore, it is necessary to consider this question of depreciation. This is a matter of considerable importance and one which is not readily intelligible from the annual reports.

The Steel Corporation has written off very large amounts from the book value of its fixed property. Thus, whereas the total capital expenditures on its fixed property down to the close of 1910 (exclusive of the original cost of the Union, Clairton, and Tennessee Coal, Iron and Railroad purchases) was $371,285,674, the company wrote off from such property no less than $329,892,199, or nearly 90 per cent of the additions.

These large amounts thus written off, however, do not represent exclusively true depreciation of the physical properties of the Steel Corporation. Instead, a large part of these amounts really represent arbitrary deductions intended to offset the inflated valuations at which the property is carried on the Steel Corporation's books. (See p. 295.)

In fact, the Corporation itself has stated that the amounts written off its property account on the balance sheet afford no real indication of the actual depreciation of its physical properties. The Bureau, therefore, made a careful study of this question of depreciation with officials of the Corporation.

General principle on which depreciation is computed.—Before discussing the problem in detail it is desirable to make clear the general principle which governs the depreciation charges of the Steel Corporation and its subsidiary concerns.

In the first place, the depreciation and exhaustion charges proper are based upon the original investment in the physical properties by the constituent concerns, and not upon their replacement cost. This is a fundamentally correct method. In the second place, a distinction is made between true depreciation as computed by the subsidiary companies on their book investment in the various physical properties and the so-called depreciation written off by the Corporation itself from its own books because of the higher values assigned some of these properties on such books to offset its own inflated capitalization. For example, suppose a subsidiary company was capitalized at $25,000,000 but that the Steel Corporation had issued its stock for this subsidiary company to the amount of $50,000,000. Under these circumstances the property account of the subsidiary company would have to be increased on the books of the Steel Corporation in order to balance the larger amount of securities issued by the latter. The subsidiary company would arrive at its depreciation provisions on the basis of its investment figure at $25,000,000. However, these provisions would be an entirely inadequate allowance for the Steel Corporation in respect to this particular property because of the higher valuation at which it carried the same property. Therefore, the Steel Corporation must and does write off from its books further sums in addition to those provided by the subsidiaries; otherwise it would not be conserving its own capital (or what it considers to be its own capital).

These further sums, however, assuming that the provisions of the subsidiary companies were properly arrived at, do not represent true depreciation or exhaustion of physical property, but, instead, are simply bookkeeping provisions necessary to maintain the nominal investment of the Steel Corporation intact. In other words, they amount to writing down water in the Steel Corporation's capitalization. While this procedure is eminently proper, and in fact desirable from the Steel Corporation's standpoint, accepting its organization on the basis actually followed, these further sums should be disregarded in the Bureau's calculation, which is expressly aimed to establish an investment which would exclude the water as well as intangible considerations. A part of these further provisions is in the form of sinking funds of the Steel Corporation's own bonds, but a considerable part is written off the property account from surplus.

So far as the amounts written off for bond sinking funds are concerned, it is apparent that these have no necessary correspondence to depreciation requirements, since they are usually governed by the terms of the indentures and can be considered as representing depreciation only on the ground that the amounts otherwise provided are not sufficient. The Steel Corporation's sinking-fund provisions are admittedly not necessary to provide for depreciation in the value of the physical property. The sinking-fund provisions of some of the subsidiary companies, however, may for convenience be treated as the equivalent of depreciation, although not necessarily such in principle.

The book value of the various properties in the Steel Corporation's accounts is not itemized in such a way as to show the valuations assigned particular properties or classes of property; therefore, the property account of the Steel Corporation can not be compared in detail with the property accounts of the several constituent concerns. However, practically the entire excessive or increased valuation of the property as entered on the Steel Corporation's books to balance its capitalization may be regarded as applicable to natural resources, particularly ore and coal. This is, indeed, admitted by the Steel Corporation itself. Moreover, this is indicated by the valuations of the various properties as shown in the Hodge suit, and also in the Corporation's 1907 appraisal, discussed subsequently. That is to say, the properties other than natural resources are carried on the Steel Corporation's books at approximately correct valuations and, therefore, the depreciation provisions of the subsidiary companies for these classes of property do not have to be increased by the Steel Corporation itself, but, in the case of the natural resources, the Steel Corporation must, because of the inflated valuations at which it carries these properties, write off further so-called depreciation allowances in addition to those made by the subsidiary concerns. Following is a statement by an official of the Steel Corporation on this point:

> The several subsidiary companies have, except as to iron ore and fuel, been charging out depreciation in their own accounts on basis of the values placed upon all of the various classes of property as listed in the Corporation's appraisal of January 1, 1908. These valuations are in all cases the original construction cost (estimated if actual not known) of the improvements or other property subject to depreciation. In respect of iron ore and fuel, the subsidiaries have charged depreciation on basis only of their own respective investments in those properties.
>
> On the foregoing basis, therefore, the subsidiary companies have been charging sufficient depreciation to cover the exhaustion transpiring in the capital investment as represented in the Steel Corporation's appraisal of 1908, except as to the two classes of property named, viz, iron ore and fuel. Now, this difference, i. e., the difference between the depreciation charged out by the subsidiaries, and the pro rata depreciation which should be charged out on basis of the investment as represented by the par of Steel Corporation stock and bonds, is covered by the charge for bond sinking fund on United States Steel Corporation bonds made by the latter company in its own accounts. As the depreciation charges made by the subsidiaries are based upon investment valuations for all properties as represented in Steel Corporation's appraisal, except as to ore and fuel, it follows that the depreciation allowances made by United States Steel Corporation proper in its own accounts through bond sinking fund charges, must cover the depreciation taking place, through exhaustion, in the appreciated values for ore and fuel as represented by the difference between the investment in those classes of property per the books of the subsidiary companies and the value thereof as represented in United States Steel Corporation securities.

Since, however, as just stated, the Bureau is considering the actual investment and not the inflated investment shown on the books of the Steel Corporation, no further attention need be paid to these so-called additional depreciation provisions made by the Steel Corporation itself, which, as just stated, are practically equivalent to writing down the water in its capitalization. The provisions made by the subsidiary companies themselves may now be taken up. In doing this it will be convenient to discuss briefly the provisions for the maintenance and improvement of the Corporation's properties as a whole. These provisions fall under four general classes—(1) ordinary maintenance and repairs; (2) extraordinary replacements; (3) depreciation and exhaustion allowances; (4) new construction and capital expenditures.

ORDINARY MAINTENANCE AND REPAIRS.—The expenditures for ordinary maintenance and repairs were defined by the Corporation as follows:

> Charges to "repairs" comprehend expenditures incurred in keeping in repair all operating machinery and equipment; also

> cost of replacing broken and worn-out parts. In the case of a billet mill, it would include repairs to heating furnaces, soaking pits, charging and drawing cranes and machinery; engines, roll trains and roll tables, ingot buggies, shears, shear tables, mill cranes, and hydraulic machinery; motors and electrical machinery; scales, scrap conveyers, etc.; in short, all cost of repairing and maintaining the so-called "active" portion of the manufacturing equipment.
>
> Charges to "maintenance," on the other hand, are restricted to the parts of a mill which are less directly involved in the product of a mill, or at least are not influenced to the same extent by the output. Maintenance charges might be high in a month when but little product is made. The account includes cost of repairing and maintaining mill buildings and roofs, trestles, tracks, track scales, fences, sidewalks, cleaning and keeping yards and roadways; repairs and maintenance of sewers and gas mains, subways and viaducts. It also includes all cost of appliances for fire protection and the cost of operating these. There is also this difference between the "repair" and "maintenance" account, namely, that the latter includes charges in the nature of maintaining yards, fences, roadways, buildings, etc., which are general to the entire plant, while "repairs" are always specific; in fact, for short, we frequently distinguish the one as "product repairs" and the other as "general repairs."

From this statement it would appear that the ordinary maintenance and repair expenditures alone go far toward maintaining the property in a state of efficiency. This is, moreover, indicated by the size of these expenditures, which for the ten-year period aggregate, roughly, $259,000,000 (1901 figures being estimated, at $14,000,000, because exact data have never been compiled), as follows:

TABLE 36.—ANNUAL EXPENDITURES OF UNITED STATES STEEL CORPORATION FOR ORDINARY MAINTENANCE AND REPAIRS, BY CLASSES OF PROPERTY, 1901–1910.

Year.	Manufacturing properties.	Iron-ore properties.	Coal and coke properties.	Railroads.	Steamships and docks.	Miscellaneous fixed properties.	Total all properties.
1901							[1] $14,000,000.00
1902	$16,099,217.94	$355,220.12	$881,804.77	$3,544,654.27	$313,801.37	$35,519.66	21,230,218.13
1903	16,046,275.00	299,204.79	967,705.49	3,989,669.49	389,368.61	153,190.00	21,845,413.38
1904	12,857,738.82	209,475.11	983,389.61	3,679.735.90	291,103.24	134,055.75	18,155,498.43
1905	16,661,943.49	274,443.75	1,472,450.57	4,898,956.24	532,412.13	136,423.20	23,976,629.38
1906	20,648,213.19	292,086.71	1,453,759.13	6,137,244.71	640,063.34	145,543.36	29,316,910.44
1907	23,256,791.26	438,110.56	1,527,545.74	7,863,446.76	740,458.53	195,340.39	34,021,693.24
1908	15,991,141.20	572,405.87	1,740,563.61	6,049,275.69	628,927.20	168,851.13	25,151,164.70
1909	21,504,281.07	716,816.92	2,238,858.40	7,591,806.24	533,221.36	216,490.87	32,801,474.86
1910	25,147,444.00	896,723.29	2,408,665.74	9,337,563.23	690,526.07	291,957.89	38,772,880.22
1901–1910	168,213,045.97	4,054,487.12	13,674,743.06	53,092,352.53	4,759,881.85	1,477,372.25	259,271,882.78
1901–1907	105,570,179.70	1,868,541.04	7,286,655.31	30,113,707.37	2,907,207.22	800,072.36	162,546,363.00

[1] Figures for 1901 have never been compiled, but have been estimated at $14,000,000 for all classes of property.

The expenditures for ordinary maintenance and repairs on the Tennessee Coal, Iron and Railroad properties during the three years 1908–1910, which are included in the above, were as follows:

Manufacturing	$3,560,984
Iron ore	825,367
Coal and coke	1,656,935
Railroad	745,881
Miscellaneous	74,638
Total	6,863,805

EXTRAORDINARY REPLACEMENTS.—The nature of the extraordinary replacement and renewal funds is indicated by the following statement taken from the Corporation's annual report for 1904, regarding the funds maintained for such expenditures:

> These funds are used to improve, modernize, and strengthen the properties. They are not used for ordinary maintenance, repairs, and renewals (such expenses are included in current operating costs), but for the rehabilitation of departments and plants through entire rebuilding or rearrangement, the installation of labor-saving devices, and the substitution of improved and modern machinery, equipment, facilities, etc., for obsolete types, etc. They are designed to provide for the current depreciation and obsolescence which is constantly taking place in the physical condition of a property, but can not be definitely cared for by replacement or substitution from year to year.

The expenditures for extraordinary replacements are essentially depreciation charges. They are not, however, exclusively so, because in some instances a portion of the amount so expended represented net capital additions to the property. The expenditures for blast-furnace relining, which are charged directly into the cost of operation through a stated allowance per ton for every ton of pig iron produced, may also be considered in the nature of depreciation.

DEPRECIATION AND EXTINGUISHMENT FUND.—A further part of the provisions for depreciation and exhaustion (more especially the latter) is made through what is known as the "depreciation and extinguishment fund." Certain amounts are set aside from the earnings to this fund each year. Such provisions are intended chiefly to represent the exhaustion of natural resources, like ore, coal, and natural gas. A very small part may represent depreciation of other property. The expenditures from this fund are not, however, necessarily applied to the replacement of such properties, but may be used for any purpose to which the Corporation sees fit to apply them.

OTHER DEPRECIATION PROVISIONS.—In addition to these provisions for extraordinary replacements, the Steel Corporation provides for a certain amount of depreciation through the bond sinking funds of subsidiary companies. While, as already stated, the retirement of bonded debt through sinking funds does not necessarily have any relation to the depreciation of property, for convenience it may be assumed that, in the absence of sufficient depreciation charges through other means, amounts so set aside for the redemption of bonds are equivalent to allowances for depreciation. This is the view taken by the Steel Corporation with respect to the sinking-fund operations of several of its subsidiary companies, and it has been accepted by the Bureau, in the main, so far as these companies are concerned, for the practical reason of convenience. It should be emphasized, however, that the Bureau is not indorsing the principle that the redemption of bonds through sinking funds affords any real measure of the true depreciation of the property.

The expenditures for ordinary maintenance and repairs are charged directly into the cost of production. This, as just stated, is also true of the provisions for blast-furnace relining. The provisions for extraordinary replacements and renewals likewise are charged by the Corporation to earnings and are not capitalized.[1]

The capital expenditures by the Corporation, which are designated as "construction expenditures," are over and above these other charges.

Section 6. Analysis of the depreciation allowances of the Corporation.

The total provisions for depreciation, exhaustion, and obsolescence made by the Steel Corporation's subsidiary companies during the period 1901–1910—this not including, for reasons already explained, the arbitrary amounts written off by the Steel Corporation itself, nor the provisions for sinking funds for the Corporation's own bonds—were $241,295,477 [2]; this includes blast-furnace relining provisions of $19,569,636. The great bulk of the total represents amounts set aside from earnings to the various funds above discussed, particularly the extraordinary replacement fund, the depreciation and extinguishment fund, and the bond sinking funds of subsidiary companies; in a few instances there were special provisions in addition to these.

The amounts thus provided by even the subsidiary companies themselves, however, exceeded in some cases the necessary allowance for depreciation and exhaustion of the physical properties. This is admitted by the Steel Corporation itself. In the aggregate, it was decided after discussion with the Corporation that substantially $38,285,000 of the amounts thus provisionally set aside was unnecessary. In order to arrive at a corrected or true total of the estimated physical depreciation, exhaustion, and obsolescence of the physical properties it is necessary therefore to deduct this excess from the total of $241,295,477 above given. This is done in the following table, which gives the total provisions from all sources for depreciation, exhaustion, and obsolescence by classes of property, and also the blast-furnace relining provisions and expenditures. In the second column are given those portions of the amounts thus provisionally set aside which have been designated as unnecessary and excessive. The third column (which represents the difference between the provisional amounts as stated in the first column and the excessive amounts given in the second column) shows, therefore, the approximate true depreciation and obsolescence of the various classes of property. The fourth column shows the amounts actually expended on these properties during this interval to make up such depreciation and exhaustion, and the fifth column shows the unrestored balance, which, therefore, represents what may be termed the "net accrued," or net outstanding, depreciation at the close of the ten-year period.

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[1] In one or two instances, certain amounts expended from the extraordinary replacement funds have been devoted to new construction. Such instances have been duly taken account of by the Bureau.

[2] The total does not include an item of $385,181 representing interest on various depreciation funds.

TABLE 37.—REVISION OF DEPRECIATION AND OBSOLESCENCE CHARGES OF SUBSIDIARY COMPANIES OF THE UNITED STATES STEEL CORPORATION, 1901–1910.

[These figures do not include certain provisions by the Steel Corporation itself for so-called depreciation, but which really are not depreciation. See text.]

	Total amount provided from all sources for depreciation and obsolescence.	Amounts excluded as excessive.	Estimated true depreciation.	Amount made good by expenditures not capitalized.	Net outstanding depreciation. (See Table 38.[1])
A. PROPERTIES OTHER THAN THOSE OF THE TENNESSEE COAL, IRON AND RAILROAD COMPANY.					
Manufacturing properties:					
1901 (9 months)	$4,025,950	[2] *$1,500,000*	$5,525,950	$3,354,107	$2,171,843
1902	15,215,425	7,000,000	8,215,425	5,730,370	2,485,055
1903	7,320,581	[2] *850,000*	8,170,581	7,816,197	354,384
1904	5,871,255	[2] *900,000*	6,771,255	5,289,082	1,482,173
1905	8,725,657	....	8,725,657	7,372,244	1,353,413
1906	16,066,067	6,000,000	10,066,067	11,916,165	[3] *1,850,098*
1907	14,171,770	3,850,000	10,321,770	14,844,162	[3] *4,522,392*
1908	8,426,136	700,000	7,726,136	8,169,048	[3] *442,912*
1909	12,485,593	690,000	11,795,593	4,988,293	6,807,300
1910	12,697,193	590,000	12,107,193	4,819,576	7,287,617
Total	105,005,627	15,580,000	89,425,627	74,299,244	15,126,383

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[1] These amounts do not necessarily represent an actual net loss in the values of the plants as indicated by their operating efficiency. They are presumed to cover both the loss in value which may have accrued from that source, plus an allowance for obsolescence.

[2] Amount added to cover estimated deficiency for each year in original provisions.

[3] Net additions not capitalized over and above true depreciation.

TABLE 37.—REVISION OF DEPRECIATION AND OBSOLESCENCE CHARGES OF SUBSIDIARY COMPANIES OF THE UNITED STATES STEEL CORPORATION, 1901-1910—Continued.

	Total amount provided from all sources for depreciation and obsolescence.	Amounts excluded as excessive.	Estimated true depreciation.	Amount made good by expenditures not capitalized.	Net outstanding depreciation. (See Table 38.[1])
A. PROPERTIES OTHER THAN THOSE OF THE TENNESSEE COAL, IRON AND RAILROAD COMPANY—con.					
Manufacturing properties—Con.					
Blast-furnace relining—					
1901 (9 months)	$800,000	[2] *$120,000*	$920,000	$743,000	$177,000
1902	1,247,363	[2] *180,000*	1,427,363	1,245,583	181,780
1903	3,439,471	2,000,000	1,439,471	2,672,058	[3] *1,232,587*
1904	1,270,959	[2] *200,000*	1,470,959	1,413,022	57,937
1905	2,016,744		2,016,744	801,902	1,214,842
1906	2,345,586		2,345,586	1,177,017	1,168,569
1907	2,267,212		2,267,212	1,480,310	786,902
1908	1,347,525		1,347,525	2,127,910	[3] *780,385*
1909	2,314,331		2,314,331	1,028,108	1,286,223
1910	2,085,235		2,085,235	1,930,355	154,880
Total relining	19,134,426	1,500,000	17,634,426	14,619,265	3,015,161
Total manufacturing	124,140,053	17,080,000	107,060,053	88,918,509	18,141,544
Iron-ore and timber properties:					
1901 (9 months)	1,524,236		1,524,236		1,524,236
1902	3,117,296	600,000	2,517,296		2,517,296
1903	2,669,994		2,669,994	212,020	2,457,974
1904	1,938,914		1,938,914	152,828	1,786,086
1905	3,271,256		3,271,256	316,402	2,954,854
1906	3,410,383		3,410,383	312,038	3,098,345
1907	4,750,147		4,750,147	428,142	4,322,005
1908	2,790,113		2,790,113	379,820	2,410,293
1909	3,729,714		3,729,714	216,820	3,512,894
1910	3,691,444		3,691,444	326,946	3,364,498
Total	30,893,497	600,000	30,293,497	2,345,016	27,948,481
Coal and coke properties:					
1901 (9 months)	874,516		874,516		874,516
1902	1,865,592	200,000	1,665,592	96,941	1,568,651
1903	1,515,451	[2] *50,000*	1,565,451	194,132	1,371,319
1904	2,120,942	100,000	2,020,942	676,085	1,344,857
1905	3,418,181	800,000	2,618,181	1,304,679	1,313,502
1906	3,138,998	300,000	2,838,998	1,171,422	1,667,576
1907	2,914,052	250,000	2,664,052	773,550	1,890,502
1908	1,712,785		1,712,785	593,629	1,119,156
1909	2,682,180		2,682,180	385,115	2,297,065
1910	2,578,289		2,578,289	339,112	2,239,177
Total	22,820,986	1,600,000	21,220,986	5,534,665	15,686,321

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[1] These amounts do not necessarily represent an actual net loss in the values of the plants as indicated by their operating efficiency. They are presumed to cover both the loss in value which may have accrued from that source, plus an allowance for obsolescence.

[2] Amount added to cover estimated deficiency for each year in original provisions.

[3] Net additions not capitalized over and above true depreciation.

TABLE 37.—REVISION OF DEPRECIATION AND OBSOLESCENCE CHARGES OF SUBSIDIARY COMPANIES OF THE UNITED STATES STEEL CORPORATION, 1901–1910—Continued.

	Total amount provided from all sources for depreciation and obsolescence.	Amounts excluded as excessive.	Estimated true depreciation.	Amount made good by expenditures not capitalized.	Net outstanding depreciation. (See Table 38.[1])
A. PROPERTIES OTHER THAN THOSE OF THE TENNESSEE COAL, IRON AND RAILROAD COMPANY—con.					
Railroads:					
1901 (9 months)	$2,031,257	$100,000	$1,931,257	$96,603	$1,834,654
1902	2,206,246	347,272	1,858,974	360,695	1,498,279
1903	2,466,873	677,792	1,789,081	972,169	816,912
1904	2,402,210	453,835	1,948,375	76,119	1,872,256
1905	4,904,126	2,460,088	2,444,038	1,854,027	590,011
1906	4,655,510	1,791,388	2,864,122	707,321	2,156,801
1907	5,654,881	2,436,572	3,218,309	1,658,082	1,560,227
1908	3,894,288	1,088,543	2,805,745	81,951	2,723,794
1909	4,337,802	1,266,460	3,071,342	969,821	2,101,521
1910	5,421,371	716,348	4,705,023	886,789	3,818,234
Total	37,974,564	[2] 11,338,298	26,636,266	7,663,577	[3] 18,972,689
Steamships:					
1901 (9 months)	451,161	[4] *175,000*	626,161	76,756	549,405
1902	919,976	175,000	744,976	192,318	552,658
1903	574,687	....	574,687	481,672	93,015
1904	749,901	....	749,901	197,982	551,919
1905	1,907,567	....	1,907,567	784,044	1,123,523
1906	1,069,720	....	1,069,720	1,631,510	[5] *561,790*
1907	830,562	....	830,562	190,565	639,997
1908	743,401	....	743,401	299,038	444,363
1909	1,364,584	....	1,364,584	554,619	809,965
1910	1,085,789	....	1,085,789	706,619	379,170
Total	[6] 9,697,348	....	9,697,348	5,115,123	4,582,225
Miscellaneous fixed properties:[7]					
1901 (9 months)	74,248	[4] *70,000*	144,248	....	144,248
1902	386,186	[4] *80,000*	466,186	53,612	412,574
1903	338,882	[4] *90,000*	428,882	13,738	415,144
1904	482,525	[4] *85,000*	567,525	35,587	531,938
1905	974,440	220,000	754,440	228,764	525,676
1906	1,168,799	125,000	1,043,799	892,048	151,751

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[1] These amounts do not necessarily represent an actual net loss in the values of the plants as indicated by their operating efficiency. They are presumed to cover both the loss in value which may have accrued from that source, plus an allowance for obsolescence.

[2] Of this total of $11,338,298 the sum of $4,148,955 is the estimated excess allowance for amortization of investment account Duluth, Missabe & Northern, Duluth & Iron Range Railroad, and St. Clair Terminal Railroad Co.; the balance represents allowances made for additions and betterments.

[3] This balance of $18,972,689 includes $6,712,612 of allowances for amortization account investment in Duluth, Missabe & Northern and Duluth & Iron Range Railroad; the corporation contends that no actual diminution of property values to this extent has thus far taken place.

[4] Amount added to cover estimated deficiency for each year in original provisions.

[5] Net additions not capitalized over and above true depreciation.

[6] This total includes $1,844,414 of credits for receipts from sale of boats and allowances for values of boats lost.

[7] Includes miscellaneous docks; in Table 38 such docks are included under transportation.

TABLE 37.—REVISION OF DEPRECIATION AND OBSOLESCENCE CHARGES OF SUBSIDIARY COMPANIES OF THE UNITED STATES STEEL CORPORATION, 1901–1910—Continued.

	Total amount provided from all sources for depreciation and obsolescence.	Amounts excluded as excessive.	Estimated true depreciation.	Amount made good by expenditures not capitalized.	Net outstanding depreciation. (See Table 38.[1])
A. PROPERTIES OTHER THAN THOSE OF THE TENNESSEE COAL, IRON AND RAILROAD COMPANY—con.					
Miscellaneous fixed properties—Continued.					
1907	$934,291	$80,000	$854,291	$555,877	$298,414
1908	180,892	[2] *100,000*	280,892	57,620	223,272
1909	344,821	25,000	319,821	88,072	231,749
1910	360,883	[2] *25,000*	385,883	193,395	192,488
Total	5,245,967	....	5,245,967	2,118,713	3,127,254
Summary, exclusive of Tennessee Coal, Iron and Railroad properties.					
Manufacturing properties	105,005,627	15,580,000	89,425,627	74,299,244	15,126,383
Blast-furnace relining	19,134,426	1,500,000	17,634,426	14,619,265	3,015,161
Total manufacturing	124,140,053	17,080,000	107,060,053	88,918,509	18,141,544
Iron ore and timber properties	30,893,497	600,000	30,293,497	2,345,016	27,948,481
Coal and coke properties	22,820,986	1,600,000	21,220,986	5,534,665	15,686,321
Railroads	37,974,564	[3] 11,338,298	26,636,266	7,663,577	[4] 18,972,689
Steamships	[5] 9,697,348	....	9,697,348	5,115,123	4,582,225
Miscellaneous fixed properties	5,245,967	....	5,245,967	2,118,713	3,127,254
Special allowance in 1903 used to cover construction	7,667,059	7,667,059	....	....	....
Grand total	238,439,474	38,285,357	200,154,117	111,695,603	88,458,514
B. TENNESSEE COAL, IRON AND RAILROAD COMPANY.					
Manufacturing properties:					
1907 (2 months, November and December)	47,995	....	47,995	32,174	15,821
1908	232,688	....	232,688	348,077	[6] *115,389*
1909	360,263	....	360,263	411,382	[6] *51,119*
1910	490,126	....	490,126	261,372	228,754
Total	1,131,072	....	1,131,072	1,053,005	78,067

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[1] These amounts do not necessarily represent an actual net loss in the values of the plants as indicated by their operating efficiency. They are presumed to cover both the loss in value which may have accrued from that source, plus an allowance for obsolescence.

[2] Amount added to cover estimated deficiency for each year in original provisions.

[3] Of this total of $11,338,298 the sum of $4,148,955 is the estimated excess allowance for amortization of investment account Duluth, Missabe & Northern, Duluth & Iron Range Railroad, and St. Clair Terminal Railroad Co.; the balance represents allowances made for additions and betterments.

[4] This balance of $18,972,689 includes $6,712,612 of allowances for amortization account investment in Duluth, Missabe & Northern and Duluth & Iron Range Railroad; the corporation contends that no actual diminution of property values to this extent has thus far taken place.

[5] This total includes $1,844,414 of credits for receipts from sale of boats and allowances for values of boats lost.

[6] Net additions not capitalized over and above true depreciation.

TABLE 37.—REVISION OF DEPRECIATION AND OBSOLESCENCE CHARGES OF SUBSIDIARY COMPANIES OF THE UNITED STATES STEEL CORPORATION, 1901–1910—Continued.

	Total amount provided from all sources for depreciation and obsolescence.	Amounts excluded as excessive.	Estimated true depreciation.	Amount made good by expenditures not capitalized.	Net outstanding depreciation. (See Table 38.[1])
B. TENNESSEE COAL, IRON AND RAILROAD COMPANY—con.					
Manufacturing properties—Con.					
Blast-furnace relining—					
1907 (2 months, November and December)	$15,929	....	$15,929	$1,665	$14,264
1908	111,690	....	111,690	49,881	61,809
1909	139,289	....	139,289	172,807	[2] *33,518*
1910	168,302	....	168,302	115,664	52,638
Total	435,210	....	435,210	340,017	95,193
Total manufacturing	1,566,282	....	1,566,282	1,393,022	173,260
Iron ore:					
1907 (2 months, November and December)	13,039	....	13,039	4,583	8,456
1908	93,700	....	93,700	5,084	88,616
1909	109,493	....	109,493	10,443	99,050
1910	79,252	....	79,252	26,241	53,011
Total	295,484	....	295,484	46,351	249,133
Coal and coke:					
1907 (2 months, November and December)	44,030	....	44,030	6,051	37,979
1908	213,584	....	213,584	20,541	193,043
1909	236,192	....	236,192	123,027	113,165
1910	216,571	....	216,571	160,403	56,168
Total	710,377	....	710,377	310,022	400,355
Railroad:					
1907 (2 months, November and December)	25,143	....	25,143	375	24,768
1908	53,416	....	53,416	701	52,715
1909	79,673	....	79,673	71,132	8,541
1910	60,628	....	60,628	11,240	49,388
Total	218,860	....	218,860	83,448	135,412
Miscellaneous fixed properties:					
1907 (2 months, November and December)	2,512	....	2,512	....	2,512
1908	12,521	....	12,521	....	12,521
1909	16,508	....	16,508	....	16,508
1910	33,459	....	33,459	....	33,459
Total	65,000	....	65,000	....	65,000
Total Tennessee Coal, Iron and Railroad properties	2,856,003	....	2,856,003	1,832,843	1,023,160
Grand total, all properties, 1901–1910	[3] 241,295,477	$38,285,357	[3] 203,010,120	113,528,446	[3] 89,481,674

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[1] These amounts do not necessarily represent an actual net loss in the values of the plants as indicated by their operating efficiency. They are presumed to cover both the loss in value which may have accrued from that source, plus an allowance for obsolescence.

[2] Net additions not capitalized over and above true depreciation.

[3] Does not include an item of $385,181 (representing interest accumulations on sundry depreciation funds) which could not be distributed.

From this table, therefore, it will be seen that the estimated deterioration or exhaustion of the physical properties of the Steel Corporation during the entire period from April 1, 1901, to December 31, 1910, including an allowance for obsolescence, and also including blast-furnace relining, amounted to $203,000,000, this being the amount after excluding that portion of the provisional allowances which was regarded as unnecessary. Of this total a little over $113,500,000 had actually been made good by expenditures upon these various properties, leaving a balance of about $89,500,000, which may be termed the net accrued or net outstanding depreciation on December 31, 1910. This latter figure, it should be kept in mind, includes an allowance for obsolescence. This obsolescence is not always apparent in the physical condition of the property but must nevertheless be allowed for in order to avoid unduly large depreciation charges at some future period.

By deducting the amounts which represent the net accrued or net outstanding depreciation from the sum of the original investment plus subsequent capital expenditures, the total net investment in the fixed properties of the Steel Corporation at the end of 1910 may be established. It will be understood, of course, that in so far as the estimated depreciation or deterioration of the property is made good by actual expenditures thereon, to this extent the assumed reduction in the value of the property has been restored; therefore, to arrive at the actual condition of the property at the end of 1910, obviously there should not be deducted from the gross investment the full amount of the estimated depreciation, but simply the balance not made good, or, as it is here called, the net outstanding depreciation. (See p. 299.)

Before doing this, however, it is worth while to analyze the figures of adjusted or true depreciation given in the preceding table by classes of property, with a view to determining whether or not these amounts are reasonable and proper.

Manufacturing properties.—The total estimated true depreciation of the manufacturing properties, including blast-furnace relining (but excluding the Tennessee Coal, Iron and Railroad Company), is $107,060,053, or an average of $10,980,518 per year for the entire period. The original investment in these manufacturing properties, as shown on page 188, has been placed at $250,000,000, and the subsequent additions, including the original cost of the Union and Clairton companies, as well as the cost of the Gary property, for the entire period were $221,459,144.[1] The average investment in these manufacturing properties (exclusive of the Tennessee concern) has been approximately $359,000,000. Of this amount, however, probably not less than $50,000,000, on the average, represents the value of land on which, taken as a whole, there has been no depreciation, but instead a rather marked appreciation. Deducting this figure gives an average of $309,000,000 for the average investment in manufacturing plants (steel works, blast furnaces, etc.). The average annual true depreciation of $10,980,518, above given, is equivalent to 3.6 per cent on this estimated average investment (excluding land). This, at first sight, may seem rather low. However, during this period the expenditures for ordinary maintenance and repairs upon these manufacturing properties, again excluding the Tennessee Coal, Iron and Railroad properties, aggregated approximately $176,500,000 (the expenditures in 1901, which have never been compiled, being estimated). Adding this figure to the total depreciation of $107,060,053, above given, gives a total for maintenance, repairs, depreciation, and obsolescence combined, of $283,560,053, and an average of about $29,000,000 per year, which is equivalent to 9.4 per cent on the average indicated investment of $309,000,000. The Bureau is of the opinion that this is sufficient to fully maintain the property and allow for all actual depreciation and obsolescence.

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[1] There is included in this total the investment of the Gary plant in terminal railroad property, but the amount of this is not large enough to affect the calculations here made to a significant extent.

It will be recalled (see Table 29, p. 269) that the total pig-iron capacity of the Steel Corporation, other than that acquired through the Tennessee Coal, Iron and Railroad purchase, was increased during the period from April 1, 1901, to December 31, 1910, by about 105 per cent, and its steel-ingot capacity was increased by 86 per cent, while its capacity for finished steel products was increased by over 83 per cent. Besides this, as already shown, there was an enormous increase in the capacity of the Corporation's cement works. The total gross expenditures upon its manufacturing properties during this period (including the original cost of the manufacturing properties of the Union and Clairton concerns, as given in Table 35, p. 292) was about $221,450,000. This, it will be seen, is, roughly, 88½ per cent of the total estimated value of $250,000,000 for its manufacturing properties in 1901 as computed by the Bureau. In other words, an addition of 88½ per cent to its investment in these manufacturing properties resulted in an increase of, roughly, from 83 to 105 per cent in their capacity, this not including the great increase in its cement department. These figures do not fairly state the case, since, in addition to this great increase in capacity, there has been extensive modernization of plants, which greatly increased their efficiency.[1]

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[1] It should be pointed out that the figures of increase in capacity here given include the Shelby Steel Tube Company, while the increase in investment does not, since that concern has been treated as one of the original constituent companies. The capacity of that concern was so small, however, that this method of treatment does not appreciably affect the comparison here made.

These figures show, therefore, that the increase in capacity has been rather more rapid than the increase in capital investment. In view of this fact and of the other evidence presented, it appears certain that the adjusted or so-called true depreciation allowances of $107,060,053 for these manufacturing properties, as shown in Table 37, are quite sufficient.

Iron-ore properties.—The estimated exhaustion and depreciation of the iron-ore and timber properties, after adjustments (again excluding the Tennessee property), as shown in Table 37, was $30,293,497. This is over and above ordinary maintenance and repair expenditures on the same properties of approximately $3,200,000.

A part of this item of $30,293,497 represents depreciation of mining improvements and mining equipment, and a small part the exhaustion of timber property. The great bulk of it, however, nominally represents the exhaustion of the ore itself. During the period from 1901–1910, inclusive, the Steel Corporation's production of Northern (Lake) ore was 176,500,000 tons. Had all of this item of $30,293,497 represented exhaustion, therefore, it would have been equivalent to about 17 cents per ton. Even allowing for the other considerations just noted, this allowance appears to be excessive on the basis of valuation arrived at by the Bureau. It will be recalled that in Chapter III the value of the ore property of the Corporation in 1901 was placed at $100,000,000. This included the improvements, the book investment in which at that time was approximately $9,000,000. Deducting this amount leaves a total of $91,000,000 for the ore itself (taking fee ore and leaseholds collectively), which, on the accepted basis of a deposit of 700,000,000 tons, would be equivalent to 13 cents per ton. This, however, takes the fee ore and the leaseholds collectively. So far as the fee ore is concerned, it has been shown that a fair valuation in 1901 would be somewhat less than 15 cents per ton, and it is not likely that the subsequent purchases of fee ore by the Corporation would bring the average of all its fee holdings above that figure. So far as the leaseholds are concerned, any such average would be greatly excessive, since, as pointed out in Chapter III, the value of the equity in these leaseholds held in 1901 can not be considered as worth more than 6 cents per ton. The average investment in the leaseholds subsequently secured was somewhat higher, but the average investment, in all the leased mines which the Corporation operated, during this period would undoubtedly be much less than 10 cents per ton.

It is important to point out that the great bulk of the production of the Steel Corporation's ore thus far has been from leased mines and not from fee properties. In the case of leaseholds secured without the payment of a bonus the Steel Corporation does not have to provide for the exhaustion of the ore itself (which is a matter that concerns the owner of the mines, the lessor), but simply has to provide for the depreciation of its mining improvements and equipment. Where a bonus was paid, the Corporation properly should provide for its extinguishment as well as for the improvements subsequently made. Granting that bonus payments in later years were somewhat higher than those prevailing in 1901, the average investment in all leasehold properties of the Corporation operated during the entire period covered would be very small.

Therefore, since most of the production thus far has been from leased mines, it is certain that if exact data were readily available the allowance made by the Steel Corporation for exhaustion of its ore might be substantially cut down. However, the amount of the reduction, while considerable in itself, would be relatively unimportant as compared with the total investment in the ore property, and, moreover, such an analysis would require a vast amount of detailed information. For these reasons it was deemed better to allow the estimated depreciation and exhaustion of the ore property to stand instead of revising it.

Coal and coke properties.—The estimated true depreciation and exhaustion of the Corporation's coal and coke property, exclusive of Southern coal and coke property, during the period from April 1, 1901, to December 31, 1910, as will be seen from Table 37, was $21,220,986. This was over and above expenditures of something in excess of $12,000,000 on the same properties for ordinary maintenance and repairs. The great bulk of this item of $21,220,986 represents the exhaustion of coal in the ground, although a portion of it represents depreciation of coke ovens and other equipment. The amount which may be regarded as the exhaustion proper, is equivalent to about 10 cents per ton for coking coal in the ground; the depreciation of coke ovens and other equipment, and the exhaustion of other coal make up the remainder. Taking good Connellsville coal land at an average cost of $1,200 per acre, and assuming an average yield per acre of 10,000 tons, the value in the ground would be about 12 cents per ton. This average, however, is undoubtedly somewhat in excess of the true cost of the Corporation's Connellsville coal; therefore an allowance equivalent to 10 cents per ton for exhaustion of such coal seems sufficient.

Railroad properties.—The estimated depreciation of the railroad property, as given in Table 37, after revision, was $26,636,266. This includes an allowance of $6,712,612 for obsolescence. The estimated depreciation seems too high in view of the very liberal expenditures for ordinary maintenance and repairs, which, for the ten-year period, were, roughly, $54,000,000 (estimating the 1901 expenditures at $2,000,000 and excluding the Tennessee property in both instances). It is a fair question, in view of the large expenditures for maintenance and repairs, whether anything should be allowed for depreciation of this property. However, since there is a reasonable doubt on this point, the Bureau has allowed the adjusted amount in its calculations.

This estimated depreciation of $26,636,266 and, likewise, the net outstanding depreciation of $18,972,689 include the above-mentioned allowance of $6,712,612 for obsolescence, as distinct from depreciation proper. Ordinarily, it has not been possible to show what has been allowed for obsolescence specifically, but the records of certain railroads were kept in such a way as to permit this. It is probable that the Corporation is justified in the case of certain of its railroads in making some allowance for obsolescence. With respect to its Lake ore railroads in particular, it is the opinion of the Corporation's experts that when the ore is eventually exhausted there will be very little business for these railroads and that they will lose the great bulk of their value. This is a debatable question, and, moreover, the probable life of the ore deposits extends so far into the future as to call for only a very small amount of obsolescence per annum at best. While, however, the allowance actually made seems somewhat excessive, nevertheless the Bureau has not reduced it.

The Steel Corporation takes the position that while it is justified in deducting this estimated obsolescence from its earnings, no deduction should be made from the investment so long as these railroads are in active operation. In other words, the Corporation contends that the provisions for obsolescence, while deducted annually from the earnings, should not be deducted from the investment until a distant date when the so-called estimated, or expected, obsolescence becomes an accomplished fact.

The Bureau has not accepted this view of the Corporation, although admitting that the question is a debatable one, but instead has deducted this amount from the investment as well as from the earnings. (See p. 340.)

STEAMSHIP PROPERTIES.—The estimated true depreciation of the steamship properties, it will be seen, was $9,697,348, or at the rate of almost exactly $1,000,000 a year for the nine and three-fourths year period. During this interval, moreover, several millions of dollars were expended upon these properties in ordinary maintenance and repairs.

It will be recalled that the value of the steamship property of the Corporation at its organization in 1901 was placed at $20,000,000. On this basis, without allowing for subsequent additions, the depreciation allowance here given would amount to almost exactly 5 per cent per annum. This does not appear excessive. On the other hand, in view of the fact that the ordinary maintenance and repair expenditures cover a good many items which might possibly come under the head of depreciation, it has been accepted as sufficient. Of this total estimated true depreciation of $9,697,348, only $5,115,123 had been made good, leaving a net outstanding depreciation of $4,582,225.

MISCELLANEOUS FIXED PROPERTIES.—The estimated depreciation of these miscellaneous properties (chiefly detached dock property, natural gas, and limestone), aggregating $5,245,967, appears reasonable and may be accepted without discussion.

TENNESSEE COAL, IRON AND RAILROAD COMPANY'S PROPERTIES.—In the case of these properties, the total provisions for depreciation were allowed to stand without deduction.

SUMMARY.—It would appear, therefore, that the revised allowances for true depreciation of the various properties, while liberal, are in the main reasonable, and they have been used by the Bureau. As already shown, a considerable part of this estimated depreciation, exhaustion, and obsolescence had been made good by actual expenditures on the property. Therefore, in order to ascertain the true investment in the properties at the close of 1910, there should be deducted, not the total amount of the true depreciation as thus estimated, but only that portion of such amount which had not actually been made good up to that date; in other words, the so-called unrestored balance, or net outstanding depreciation. The total of this amount for all properties, as already stated (including blast-furnace relining), was $89,481,674.

Section 7. Net additions to the tangible property of the Steel Corporation, 1901–1910.

FIXED PROPERTIES.—The net outstanding depreciation above arrived at covered not only the original property of the Steel Corporation but also the additions thereto up to the close of 1910. For convenience, however, this outstanding depreciation may be set against the capital additions to the fixed properties of the Corporation, as given in Table 35, page 292, in order to arrive at what may be called the total net additions to such property during this period. This is done in Table 38, on page 310, below, which gives first the total gross capital additions, as stated in Table 35, then the deductions for net outstanding depreciation as given in Table 37, leaving a total which represents net capital additions to these fixed properties for this period.

NET ADDITIONS TO OTHER ASSETS.—In the case of the assets other than fixed properties, the figures of increases given in Table 32, on page 280, are net. It may be noted that the net current assets, as there stated, include in the inventories certain bookkeeping profits which have been nominally made by some subsidiary concerns on the sale of such materials or products to other subsidiary companies, but which have not been actually realized because such products have not been sold to an outside interest. The Corporation in its annual reports since 1904 has deducted such "locked up" or "deferred" profits, as they may be called, from its operating profits, before arriving at what it terms its net earnings. This matter is more fully discussed in the chapter on profits. (See p. 333.) Had the Bureau adopted the Corporation's present practice of deducting the deferred intercompany profits in inventories from the earnings, a corresponding deduction from the investment would also have been necessary. While the Corporation's practice in this respect is conservative, for the purposes of this discussion the Bureau determined not to deduct deferred intercompany profits from the earnings, nor to make the corresponding deduction from investment. The table showing the net additions to the investment from 1901 to 1910 follows:

TABLE 38.—NET ADDITIONS TO INVESTMENT OF STEEL CORPORATION, APRIL 1, 1901, TO DECEMBER 31, 1910.

Description.	Total additions, as per Table 35.	Estimated true depreciation.	Amount made good by expenditures not capitalized.	Net outstanding depreciation to be deducted from investment.	Net additions to investment.
Fixed property (exclusive of Gary and Tennessee Coal, Iron and Railroad Company):					
Manufacturing	$151,480,449	$107,060,053	$88,918,509	$18,141,544	$133,338,905
Iron ore	62,093,931	30,293,497	2,345,016	27,948,481	34,145,450
Coal and coke	34,112,303	21,220,986	5,534,665	15,686,321	18,425,982
Transportation	74,541,029	37,336,955	13,462,331	23,874,624	50,666,405
Miscellaneous fixed property	5,548,556	4,242,626	1,435,082	2,807,544	2,741,012
Other assets:					
Deferred charges	13,243,678				13,243,678
Investments	2,128,364				2,128,364
Sinking funds	16,067,666				16,067,666
Net current assets	101,683,544				101,683,544
Total	460,899,520	200,154,117	111,695,603	88,458,514	372,441,006
Gary plant [1]	69,978,695				69,978,695
Tennessee Coal, Iron and R. R. Co. [2]	60,468,518	2,856,003	1,832,843	1,023,160	59,445,358
Sundry adjustments	3,063,594				3,063,594
Grand total	594,410,327	[3] 203,010,120	113,528,446	[3] 89,481,674	504,928,653

[1] Includes city of Gary and railroad property. The figure is the construction cost. Depreciation of this plant is included in the figures given above. The total amount of accrued depreciation—not including certain amounts for terminal railroad property which could not be segregated—was $1,239,393.

[2] Original cost of fixed property plus subsequent additions.

[3] Excluding an item of $385,181 which could not be distributed.

Section 8. Total investment in tangible property of Steel Corporation, December 31, 1910.

In the following table the total net additions to the property of the Steel Corporation from 1901 to 1910, as given in Table 38, are added to the investment of the Corporation on April 1, 1901 (see Table 23), thus giving what may be regarded as the total investment in the properties of the Corporation at the close of 1910; as previously noted, the cost of the Gary plant and of the Tennessee Coal, Iron and Railroad Company are stated separately instead of being distributed. In this table the other assets are given by classes and in exact figures, instead of in a single round sum, as in Table 23.

TABLE 39.—INVESTMENT IN TANGIBLE PROPERTY OF STEEL CORPORATION ON DECEMBER 31, 1910, AS COMPUTED BY BUREAU.

Description.	Investment 1901.	Net additions 1901-1910.[1]	Total investment Dec. 31, 1910.
Fixed property (exclusive of Gary and Tennessee Coal, Iron and Railroad Company):			
Manufacturing	$250,000,000	$133,338,905	$383,338,905
Iron ore	100,000,000	34,145,450	134,145,450
Coal and coke	80,000,000	18,425,982	98,425,982
Transportation	91,500,000	50,666,405	142,166,405
Miscellaneous fixed property	24,000,000	2,741,012	26,741,012
Other assets:			
Deferred charges	2,088,027	13,243,678	15,331,705
Investments	241,030	2,128,364	2,369,394
Sinking funds	239	16,067,666	16,067,905
Net current assets	134,224,089	101,683,544	235,907,633
Total	682,053,385	372,441,006	1,054,494,391
Gary plant [2]		69,978,695	69,978,695
Tennessee Coal, Iron and Railroad Company		[3] 59,445,358	59,445,358
Sundry adjustments [4]		3,063,594	3,063,594
Grand total	682,053,385	504,928,653	1,186,982,038

[1] As per Table 38.

[2] Includes city of Gary and railroad property. See note 1 to Table 38.

[3] Original cost of fixed property and additions thereto since its acquisition.

[4] Sundry adjustments made in the balance sheet without distribution by classes of property.

It should be repeated that the Bureau's figures of investment do not necessarily represent the *value* of such investment in 1910. So far as the properties other than natural resources—ore, coal, natural gas, and land—are concerned, it is reasonably safe to place the value at about the known cost, after allowing for depreciation in the manner above explained. With respect to the natural resources of the Corporation, however, the case is different. In some instances the value may have decreased or disappeared altogether. In general, however, the value of these classes of property, particularly of ore property and land, has increased. Undoubtedly, this increase in the value of the ore (and, to a less extent, of the coking-coal property) has been due in considerable measure to the great concentration of ownership of such property during the past ten years and, to no small extent, to the very substantial concentration of such ownership in the hands of the Steel Corporation alone. This matter is discussed elsewhere. (See p. 325.) At the moment it is desired simply to emphasize that the mere addition of the cost of such natural resources, secured since April, 1901, to their estimated value on that date may not give a fair indication of their value at the present time. The following table gives the net investment in the property of the Steel Corporation at the close of each year from 1901 to 1910, arrived at by adding to the original investment in 1901 the gross additions as given in Tables 32 and 33 and deducting from the combined results the net accrued or outstanding depreciation as given in the last column of Table 37. The current assets as given are net. (See note 7 to Table 32.)

TABLE 40.—TOTAL INVESTMENT OF STEEL CORPORATION IN TANGIBLE PROPERTY, AS REVISED BY BUREAU, BY CLASSES, AFTER DEDUCTIONS FOR NET ACCRUED DEPRECIATION, AT CLOSE OF EACH YEAR, 1901-1910.

Description.	1901.	1902.	1903.	1904.	1905.
Fixed property (exclusive of Gary and Tennessee Coal, Iron and Railroad Company):					
Manufacturing	$256,988,756	$278,630,273	$300,317,051	$317,883,734	$323,879,618
Iron ore and timber	101,836,880	109,934,668	109,544,653	110,991,640	111,286,611
Coal and coke	80,300,648	86,879,373	89,555,933	91,067,136	93,932,620
Transportation	91,421,116	93,281,569	97,330,868	98,607,182	105,024,040
Miscellaneous fixed property	24,585,185	24,480,613	24,899,687	24,926,627	26,404,163
Other assets:					
Deferred charges	1,737,456	1,633,391	2,177,046	2,440,739	3,197,723
Investments	3,871,954	1,874,872	2,412,149	1,920,176	1,180,343
Sinking funds	245,319	1,388,862	3,607,448	6,958,449	16,736,553
Net current assets [1]	138,110,545	165,007,905	176,070,249	162,770,486	191,881,062
Sundry adjustments	*228,103*	463,393	700,895	671,974	1,318,187
Grand total	698,869,756	763,574,919	806,615,979	818,238,143	874,840,920

Description.	1906.	1907.	1908.	1909.	1910.
Fixed property (exclusive of Gary and Tennessee Coal, Iron and Railroad Company):					
Manufacturing	$337,456,214	$364,441,140	$380,145,004	$379,465,023	$383,338,905
Iron ore and timber	113,771,916	119,879,749	126,212,969	130,474,304	134,145,450
Coal and coke	93,354,423	95,557,205	96,376,451	98,165,272	98,425,982
Transportation	114,052,751	127,013,556	131,947,097	133,867,228	142,166,405
Miscellaneous fixed property	26,409,597	26,236,798	26,390,851	26,383,107	26,741,012
Other assets:					
Deferred charges	4,272,622	6,204,734	9,106,666	12,763,191	15,331,705
Investments	1,617,351	1,717,120	3,083,000	2,353,110	2,369,394
Sinking funds	27,443,945	32,442,402	23,263,035	21,738,953	16,067,905
Net current assets [1]	222,895,896	229,347,482	196,190,322	229,873,440	235,907,633
Gary plant [2]	4,720,159	24,063,388	42,797,229	53,905,844	69,978,695
Tennessee Coal, Iron and Railroad Company	....	49,842,295	53,009,973	56,031,697	59,445,358
Sundry adjustments	1,403,010	2,017,733	1,902,890	1,854,824	3,063,594
Grand total	947,397,884	1,078,763,602	1,090,425,487	1,146,875,993	1,186,982,038

[1] See note 7, Table 32.

[2] See note 1, Table 38.

In Table 44, on page 328, this net investment is stated in the form of a constructive balance sheet. The property account is there given in total instead of by classes, while the current assets are given in gross as well as the current liabilities instead of simply stating the net current assets as in Table 40.

Section 9. Comparison of Bureau's figures of investment in tangible properties of Steel Corporation at the close of 1907 with the Corporation's estimate of their value on that date.

Before discussing further the indicated investment of the Corporation at the close of 1910, it is desirable to present the figures of investment up to the close of 1907, for the reason, already noted, that the Steel Corporation itself made an appraisal of its properties as of that date. This appraisal was apparently made with considerable care. The various properties of the Corporation were itemized in great detail. The figures for manufacturing properties were largely based on the known or estimated construction cost and not on an engineering appraisal. The real estate and natural resources, however, were entered at the estimated current value. The real estate was valued separately from the improvements thereon, while in the case of ore properties the holdings were carefully scheduled and the tonnages estimated, both by ranges and by qualities.

This valuation by the Corporation of its various properties at the close of 1907 is compared in Table 41 with the investment in these properties as computed by the Bureau, this being arrived at by adding to its figures of value on April 1, 1901, the net additions thereto up to the close of 1907, computed in the same manner as in Table 38. The Corporation's figures, like those of the Bureau, take account of depreciation.

TABLE 41.—BUREAU'S ESTIMATE OF INVESTMENT IN PROPERTY OF STEEL CORPORATION AT CLOSE OF 1907 COMPARED WITH CORPORATION'S ESTIMATE OF VALUE AT THAT TIME.

Description.	Investment as computed by Bureau, Dec. 31, 1907.	Value as estimated by Corporation.	Difference.
Fixed property (exclusive of Gary and Tennessee Coal, Iron and Railroad Company):			
Manufacturing	$364,441,140	$367,632,230	$3,191,090
Iron ore and timber	119,879,749	[1] 641,242,880	521,363,131
Coal and coke	95,557,205	142,521,913	46,964,708
Transportation	127,013,555	145,048,041	18,034,486
Miscellaneous fixed property	26,236,798	19,619,052	[2] *6,617,746*
Other assets:			
Deferred charges	6,204,734	....	[3] *6,204,734*
Investments	1,717,120	....	[3] *1,717,120*
Sinking funds	32,442,402	32,442,402	....
Net current assets	229,347,483	229,347,483	....
Total	1,002,840,186	1,577,854,001	575,013,815
Gary plant [4]	24,063,388	24,063,388	....
Tennessee Coal, Iron and Railroad Company	49,842,295	49,747,753	[5] *94,542*
Sundry adjustments	2,017,733	....	[3] *2,017,733*
Grand total	1,078,763,602	1,651,665,142	572,901,540

[1] Includes about $5,700,000 of timber property.

[2] This excess of the Bureau's figure over that of the Corporation is chiefly due to the fact that in computing the investment in 1901 the Bureau allowed a very liberal valuation. The Corporation contends that its 1907 appraisal of these properties was very conservative.

[3] Excess over Corporation's estimate, which did not include these items specifically, but which, however, allows for most of them in other items.

[4] Includes city of Gary and railroad property.

[5] Excess over Corporation's estimate.

It will be seen at once from this table that the most marked differences between the investment as computed by the Bureau and the valuation as arrived at by the Corporation occur in the case of the iron-ore property (including timber) and the coal and coke property. In the former the excess of the Corporation's figure over that of the Bureau is more than $521,000,000, while the excess in the case of the coal and coke is nearly $47,000,000.

The Corporation's valuation of its manufacturing properties naturally agrees very closely with that of the Bureau because the Bureau's figure was partly based upon that of the Corporation. (See p. 188.) Moreover, the Corporation's figures for these manufacturing properties are stated to be substantially the construction cost. The real estate, however, was put in at the appraised current value.

It may be noted that blast-furnace valuations frequently ran in excess of $750,000 per furnace, and in some instances above $1,000,000; some of the larger furnaces, in fact, were valued at more than $1,500,000.

The land valuations often were very high. Thus, land in the Pittsburg district was frequently valued at $20,000 per acre, in several cases at as much as $50,000, while in one instance the valuation ran as high as $300,000 per acre, and there were several instances where the valuations were as much as $100,000 per acre. The extreme prices named were for exceptionally valuable parcels of real estate, sometimes in central locations in a city. However, the figures generally indicate a liberal basis of valuation.

The Corporation's appraisal value of its transportation properties, it will be noted, exceeds the Bureau's figure of investment by about $18,000,000. This, on the whole, is not an extraordinary difference, but the Bureau regards its own figure as sufficiently liberal.

The Bureau's figure for the Gary plant is the Corporation's figure of construction cost. It will be observed that this is given in a single total, and not classified. The Gary plant has no ore or coal property, and the great bulk of the investment is in manufacturing plants. It has, however, an extensive investment in transportation property, and some investment in miscellaneous property. Since, however, the Corporation in its appraisal did not classify this property, it was not necessary for the Bureau to make a distribution of the total cost. The depreciation of this plant is not shown separately, as complete data were not available; the total amount (see note 1, p. 310) was small. The Bureau, for reasons already stated, entered the Tennessee Coal, Iron and Railroad property at its cost as computed by the Corporation, including expenditures made after the purchase in 1907. (See p. 289.)

The excess of approximately $47,000,000 in the Corporation's figure for its coal and coke property over that of the Bureau is principally due to the fact that the Corporation was dealing with an appraised valuation whereas the Bureau's figure largely represents the investment cost (in other words, the valuation in 1901 plus the actual cost of subsequent additions), and does not allow for any appreciation during this interval. As a matter of fact, there had been some appreciation in this property, although perhaps not to the extent claimed by the Corporation. A part of this appreciation, it should be noted, must be attributed to the concentration of the most desirable coking-coal lands in the hands of the Steel Corporation.

An idea of the liberal basis upon which coal and coke valuations were computed by the Corporation may be obtained from the mere statement that considerably more that one-half of its coking coal was entered at an average valuation of $1,750 per acre, while the lowest valuation for any coking coal, with the exception of a small tract of about 250 acres, was $1,200 per acre. The latter valuation applied to coking coal in the so-called Klondyke region. Its steam coal was put in at $350 per acre. These valuations are undoubtedly high.

The bulk of the coke-oven property of the Corporation was valued on the basis of $1,400 per oven. Although this covered improvements to mines, machinery, and equipment, this average nevertheless seems high.

In the case of the miscellaneous fixed property the Bureau's figure of investment is $26,236,798, as against an appraised valuation by the Corporation of $19,619,052. The excess of the Bureau's figure over that of the Corporation is partly due to the fact that the Bureau undoubtedly allowed a very liberal valuation for the natural-gas property in 1901, namely, $20,000,000, the full amount claimed by the Steel Corporation in the Hodge suit. (See p. 182.) In this 1907 appraised valuation, on the other hand, this natural-gas property was valued by the Corporation at only about $10,300,000. While the property had suffered considerable exhaustion during this period, nevertheless the Corporation's appraisal in 1907 was on a very much more conservative basis than that in 1902. The Corporation, in fact, claims that its 1907 valuation was altogether too conservative, and that these natural-gas properties were easily worth $20,000,000 to $25,000,000.

Therefore, as in the case of the Corporation's estimate submitted in the Hodge suit in 1902, the principal difference between its figures and those of the Bureau in this comparison for 1907 lies in the item of iron ore. As just shown, the excess of the Corporation's estimate of the value of its ore property over the Bureau's estimate of the investment in that property at the close of 1907 is approximately $521,000,000. It may be conceded that the Bureau's figure of investment somewhat understates the value of this ore property on that date, since it is known that there had been some appreciation in the value of iron-ore properties during the period from April 1, 1901, to December 31, 1907. An accurate valuation of the ore property of the Corporation at the close of 1907 is an extremely difficult matter because of the effect of the great concentration of ownership or control of ore property upon such values. Where a very few holders own or control the great bulk of a given natural resource of this sort, and are indisposed to sell, the values may not only be artificially enhanced but also difficult to determine.

It is unnecessary and somewhat impracticable to attempt a quantitative valuation of the ore property of the Steel Corporation in 1907, because of the influence of concentration of control just noted. However, it is very easy to show that the valuation of approximately $640,000,000 claimed by the Corporation is grossly excessive. Of the total as stated, approximately $607,000,000 was for the ore itself (taking fee property and leaseholds together), as distinct from the improvements. This valuation covered a total of approximately 1,182,000,000 tons, thus giving an average of 51 cents per ton (taking fee ore and leaseholds collectively). This total tonnage, it may be noted, does not include the extensive deposits acquired through the Hill lease, discussed below; on the other hand, nothing was entered in the Corporation's valuation for this Hill ore property except for certain expenditures for development work and for advanced royalties.

Any such average valuation of 51 cents per ton for the ore property of the Steel Corporation at the close of 1907 is inadmissible. This valuation could easily be discredited by discounting the average rate of royalty on new leases taken out during the period from 1901 to 1907, computed in the same way as has already been done in discussing the value of the original ore property of the Steel Corporation in Chapter III. (See pp. 216–228.) Such a detailed discussion, however, is unnecessary. Convincing evidence that this valuation of $607,000,000, claimed by the Steel Corporation for its ore in 1907 is excessive is afforded by the mere statement of the actual cost of this ore property. Thus, the total capital expenditures by the Corporation upon its ore property from April 1, 1901, to the close of 1907, before deducting depreciation, were $38,600,000. Of this total approximately $19,000,000 represents the expenditure for ore, including fee and leasehold properties collectively as distinct from improvements. By this expenditure of approximately $19,000,000 (of which nearly $9,000,000 was for the Union and Clairton ore) the Steel Corporation added to its ore reserves (again taking fee properties and leaseholds together) several hundred million tons of ore, this again excluding the "Hill" ore. The exact amount added can not be stated because large increases in the estimated total have been made by proving up ore lands held in 1901. Moreover, the amount assumed or estimated to have been added, at the time of purchase, rather than the amount actually proved by later development to have been added, is the really significant fact. It is entirely conservative to place the additions from this expenditure of $19,000,000, as currently estimated at the time, at several hundred million tons. This means that the average cost per ton of the ore acquired since 1901 (again treating fee and leaseholds collectively) was only a few cents, whereas the total value claimed by the Steel Corporation at the close of 1907 was equivalent to over 50 cents per ton. While, as already pointed out, the original cost of a mining property is not a reliable indication of its value after subsequent development, it is incredible that during this interval of less than seven years fee ore and leaseholds which cost, on the average, only a very few cents per ton could have increased to a value of as much as 50 cents per ton. In this connection it may be noted that the average rate of royalty on new leases taken out by the Steel Corporation in the Lake Superior region from 1907 to 1910, inclusive, apparently is not over 40 cents per ton (see p. 321), as compared with an average rate for old and new leases combined, in 1901, of about 28 cents. The quality of ore covered by the recent leases may have been somewhat lower, but allowing for this the advance in royalties would in no way justify the high valuation placed on its ore by the Corporation in 1907.

A very important consideration to be kept in mind is that the bulk of the Steel Corporation's ore property in 1907 consisted of leaseholds and not ore in fee. Apparently two-thirds at least of the total tonnage was simply leased. For the mining of ore from such leased properties the Corporation must, of course, pay a royalty, so that for this leased property the Steel Corporation simply has an equity interest in the ore. Even if all the new leases had been taken out at the same rate of royalty as prevailed in 1901, it is certain that the value of these equities in the aggregate plus the value of the ore owned in fee would not equal the large total claimed by the Corporation in its 1907 appraisal. As a matter of fact, the royalties on many of these leases were considerably higher than the average of 28 cents prevailing in 1901. This increase in the royalty paid by the Steel Corporation, of course, does not mean any increase in the value of its equity, since as clearly shown on page 205 a royalty payable never represents an asset to the company paying it, but, instead, a cost.

Therefore, the inevitable conclusion is that the Steel Corporation in appraising its ore property in 1907, just as in the case of its estimate in the Hodge suit in 1902, used a very extravagant valuation. It may be noted incidentally that the fact that the average valuation in 1907 of about 50 cents per ton very thoroughly discredits the estimate of $1 per ton used by the Steel Corporation in the Hodge suit in 1902.

GREAT NORTHERN ("HILL") ORE LEASE.—It will be recalled that on January 1, 1907, the Steel Corporation leased the bulk of the extensive ore holdings of the Great Northern Railway system on the basis of an 85-cent royalty for 59 per cent (dried) ore, with an increase of 3.4 cents per ton each successive year.

This high rate of royalty has frequently been cited in discussions of the ore industry as conclusive evidence of a very pronounced appreciation in the value of ore properties since 1901. The Bureau, however, interprets this transaction in a very different light.

The essential facts in this transaction may, for convenience, be briefly restated:

1. The property leased consists partly of fee ore and partly of leaseholds in Minnesota, covering altogether something less than 40,000 acres of ore lands.

2. The rates of royalty, which include the charges for the rail transportation, as well as dockage charges, were as follows for the year 1907:

Per cent iron.	Royalty per ton.	Per cent iron.	Royalty per ton.	Per cent iron.	Royalty per ton.
49	$1.1680	55	$1.4572	61	$1.7464
50	1.2162	56	1.5054	62	1.7946
51	1.2644	57	1.5536	63	1.8428
52	1.3126	58	1.6018	64	1.8910
53	1.3608	59	1.6500	65	1.9392
54	1.4090	60	1.6982	66	1.9874

with an increase of 3.4 cents per ton every year, for all grades specified above.

3. The minimum tonnage upon which royalty must be paid is very high, as follows: For 1907 a minimum of 750,000 tons, with a cumulative additional minimum of 750,000 tons for each year thereafter until 1917, when the minimum will reach 8,250,000 tons, remaining fixed at that figure until the expiration of the lease.

4. The Great Western Mining Company, the lessee (a subsidiary of the Steel Corporation), agrees to ship all the ore over the Great Northern Railway to the port of Superior, on Lake Superior.

5. The term of the lease extends, with respect to fee ore, " until all merchantable ore 49 per cent and richer in iron shall have been shipped; " and, with respect to leaseholds, during the " term of the leases under which such lands are held, less three months."

6. A special provision in the agreement, however, permits the cancellation of the lease by the Steel Corporation on January 1, 1915, upon giving two years' previous notice.

For ore less than 49 per cent, the total charge is fixed at $1.10 per ton without change or annual increase, provided that if any ores are mined from subleases on which there is a higher royalty payment, then the Steel Corporation's royalty shall be equal to that stipulated in the original lease. There were some minor modifications of the arrangement, particularly with respect to the date of payment of dockage charges, and advance royalties, which need not be stated here.

Of these various provisions, there are three which call for particular attention, namely, (1) the very high rate of royalty, with the annual increase of 3.4 cents per ton; (2) the large minimum tonnages, and (3) the right of the lessee to cancel the lease in 1915.

The rate of $1.65 per ton for 59 per cent dried ore for 1907, above given, as already stated in Chapter V, includes the transportation of the ore to Lake Superior, and dockage there. The regular charge for this service has always been 80 cents per gross ton for the railroad in question. Therefore, the base rate of royalty for 1907 may be considered as the difference between this total charge of $1.65 and the 80 cents per ton for transportation and dockage, or, in other words, 85 cents per gross ton.[1]

This net royalty of 85 cents for 59 per cent dried ore, however, applied only in the year 1907. In the next year there was, as already stated, an increase of 3.4 cents per ton, and a further increase of a like amount in every succeeding year, thus making the actual net royalties per ton, yearly, for the period from 1907 to 1916, as follows:

Year.	Net base royalty per ton.	Year.	Net base royalty per ton.
1907	$0.850	1912	$1.020
1908	.884	1913	1.054
1909	.918	1914	1.088
1910	.952	1915	1.122
1911	.986	1916	1.156

This increase of 3.4 cents per ton, yearly, is equivalent to 4 per cent simple interest on the original net royalty of 85 cents per ton. The same addition, however, was made for all ore of 49 per cent iron content and above, irrespective of quality. Therefore, for the lower grades, this addition of 3.4 cents per ton is equivalent to a little more than 4 per cent. On the other hand, of course, in the case of the higher grades of ore, it would be somewhat less than 4 per cent.

The royalties thus far paid under the lease indicate that the ore which has been extracted runs only a little less than 59 per cent iron content when dried. Such ore corresponds approximately to a 53 per cent ore in its natural state.

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[1] The net royalties for the other grades of ore, as already stated, varied in accordance with a sliding-scale arrangement. These royalties in 1907, less transportation charges, would have been as follows:

Per cent iron.	Royalty, net, per ton.	Per cent iron.	Royalty, net, per ton.	Per cent iron.	Royalty, net, per ton.
Under 49	$0.3000	55	$0.6572	62	$0.9946
49	.3680	56	.7054	63	1.0428
50	.4162	57	.7536	64	1.0910
51	.4644	58	.8018	65	1.1392
52	.5126	59	.8500	66	1.1874
53	.5608	60	.8982		
54	.6090	61	.9464		

For each successive year after 1907 there is also an increase of 3.4 cents per ton for ore of 49 per cent and over.

This base rate of royalty in the Hill lease was far in excess of the going rates for similar ore at this time, and, taken in connection with the annual increment of 3.4 cents per ton, which was a very extraordinary provision, these royalties were unprecedented. It is true that occasional leases had been made at as high as a dollar per ton, without, however, any annual increment for interest. But such leases were decidedly exceptional, and also applied to comparatively small parcels of ore of superior quality or availability. The royalty rates on new leases for the Steel Corporation during the period from 1907 to 1910 were very much lower, and none of them approached that of the Hill lease. The following tabular statement shows substantially the terms of royalty for all leases of Mesabi Range properties made by the Steel Corporation from 1907 to 1910, inclusive, including renewals of former leases.

TABLE 42.—RATES OF ROYALTY STIPULATED IN LEASES MADE BY THE STEEL CORPORATION (INCLUDING RENEWALS) OF ORE PROPERTIES IN THE MESABI RANGE, 1907-1910.

Mine.	Royalty.	Mine.	Royalty.
I. Renewals or extensions of prior leases:		III. Other leases, 1907-1910:	
Park Lot	$0.60	[1]	$0.75
Oscar Mitchell lease	.25	[1]	[4].35-.45
II. Leases made, 1907-1910, but under option previous thereto:		Republic Forty	[5].35
		[1]	.75
[1]	[2].35-.60 [3].20-.45	[1]	.75
		[1]	.25-.35
[1]	.25	[1]	.25
[1]	.36	Simple average all leases (using means where royalty takes form of a range of price)	.4373
[1]	.50		
Mooswa lease	.25		

[1] Not designated by name of mine but by surveying specifications.

[2] Ore over 58 per cent iron and under 0.05 per cent phosphorus, advancing from 1908 to 1928.

[3] Other ore advancing from 1908 to 1928.

[4] Thirty-five cents for first five years.

[5] Taken for surface purposes and not considered valuable for ore.

The average rate of royalty for these Mesabi Range properties during this period was, therefore, about 44 cents per ton.

The Steel Corporation during this period entered into a few new leases or renewals of leases on the old ranges and also in the Baraboo district—less than a dozen in all. Most of the leases of old range properties provided for a sliding-scale royalty dependent on the price of ore at Cleveland. It is impossible, therefore, to say what the royalty at any future time will be. Using the highest price for ore at Cleveland thus far reported—$5 per ton—the average royalty in these leases would be under 40 cents per ton. The royalties in the Baraboo leases ranged from only 10 to 20 cents per ton, the ore in this district being of a rather low grade.

Since the Hill properties leased by the Steel Corporation were all on the Mesabi Range, it seems fairer to use the average for that range only for comparison with these recent leases by the Corporation, although the average for this region is higher than that for all leases made by the Corporation in these years in the entire Lake district. The average rate for all the leases, excluding those in the Baraboo district, as nearly as can be computed from available data would be less than 40 cents.

It is believed that the average content of the ore covered by the Mesabi leases listed in the foregoing table is not very far from 53 per cent—or 59 per cent when dried—the base grade in the Hill lease. Therefore, it seems entirely fair to compare the average royalties shown by the above table with the royalty for 59 per cent dried ore, as stipulated in the Hill lease. Extensive data gathered by the Bureau for the average yield of Lake ores used in blast furnaces from 1902 to 1906, inclusive, covering a large percentage of the Lake ore sold and used in these years, show an average natural iron content of about 53.9 per cent. By far the greater part of this was Mesabi ore.

It will be seen that in only three of the leases mentioned in the foregoing table, namely, the three leases at a 75-cent royalty, do the royalties approach anywhere near the base royalties of the Hill lease for the year 1907, and when account is taken of the fact that the Hill royalties increase each year, the disparity is all the more marked.

The question, therefore, arises as to why the Steel Corporation entered into this lease under the onerous conditions noted. The only reasonable explanation which the Bureau has found for this unusual transaction is that it was designed to prevent this ore from falling into the hands of competitors of the Corporation. Had this ore been sold or leased in small parcels to a large number of independent producers, this might have tended to depress the price of ore as well as to foster competition in the manufacture of iron and steel. On the other hand, if these ore lands were simply held by the Great Northern interests without development, this would leave the opportunity open for the organization of a very important rival to the Steel Corporation. At this time, however, the Steel Corporation was the only concern in the iron and steel business which was in a position to consider the acquisition of these Hill ore lands in a single block. By securing control of these enormous reserves the Steel Corporation obviously strengthened its control of the ore industry and at the same time put substantial obstacles in the way of further competition in the iron and steel industry.

The Steel Corporation specifically denies that this lease was intended thus to head off competition, and, instead, contends that it was desired merely in order to strengthen the Corporation's ore reserves. At the time this lease was entered into, however, the Corporation had fully a thirty years' supply (and perhaps a fifty years' supply) of ore under its control. Had this Hill ore been acquired at a bargain price, an obvious reason for its acquisition would be furnished; but in view of the extraordinarily high rate of royalty at which this ore was taken over and the other onerous conditions in the lease, particularly the high minimum tonnage stipulated, the only reasonable explanation, in the opinion of the Bureau, is that the Corporation chiefly desired to forestall competition. The high royalty named in this lease, therefore, instead of being proof of a marked appreciation in ore values, is rather an indication of the extent to which the Steel Corporation was ready to go in order to prevent this ore from falling into the hands of rival interests.

In view of the exceptionally high royalties stipulated in this lease, it is hardly surprising that the Steel Corporation did not claim, in its appraisal of 1907 above discussed, any value for this lease in the schedule of its assets.

Considering the great value which has been claimed for it by some writers upon iron and steel matters, this fact is at least interesting. Obviously, however, a lease at a royalty far above the going rate of royalty for ore of similar character has no transfer value and therefore no equity value which would warrant the Corporation in treating it as an asset. Indeed, in view of the extremely high rate of royalty and the high minimum requirements, this lease may perhaps be regarded as an onerous burden rather than an asset.

In this connection, the clause in the lease which permits the Steel Corporation on two years' notice to cancel the lease on January 1, 1915, is perhaps significant. Indeed, there have been rather definite intimations by officials of the Corporation that this option may be exercised.

Section 10. Comparison of the investment of the Steel Corporation at the close of 1910 with its capitalization at that date.

The Steel Corporation has made no detailed appraisal of its various properties since the close of December, 1907. The investment in these properties at the close of 1910, as computed by the Bureau, has already been given in Table 39, on page 311. This investment may now be compared with the total capitalization of the Corporation. This is done in the following table, which also gives a similar comparison for each year of the period 1901–1910. Purchase-money obligations and sundry mortgages are here as elsewhere included as part of the capitalization. (See also Table 44, p. 328.)

TABLE 43.—COMPARISON OF TOTAL INVESTMENT IN TANGIBLE PROPERTY OF STEEL CORPORATION, AS COMPUTED BY BUREAU, WITH OUTSTANDING CAPITALIZATION YEARLY, 1901-1910.

Year ended Dec. 31—	Total capitalization.[1]	Total investment in tangible property as computed by Bureau.	Intangible considerations and water.
1901 [3]	$1,402,846,817	[2] $682,053,385	[2] $720,793,432
1901	1,398,241,589	698,869,756	699,371,833
1902	1,388,928,478	763,574,919	625,353,559
1903	1,442,605,000	806,615,979	635,989,021
1904	1,444,829,189	818,238,143	626,591,046
1905	1,441,999,234	874,840,920	567,158,314
1906	1,434,971,977	947,397,884	487,574,093
1907	1,474,162,812	1,078,763,602	395,399,210
1908	1,465,976,790	1,090,425,487	375,551,303
1909	1,477,731,505	1,146,875,993	330,855,512
1910	1,468,033,260	1,186,982,038	281,051,222

[1] Including bonds, mortgages, and purchase-money obligations, but excluding unacquired stock of subsidiary companies. (See Table 44.)

[2] The slight difference between these figures and those given on page 239 is due to the fact that the investment there was stated in round numbers.

[3] April 1, 1901.

From this table therefore it appears that the investment in the tangible property of the Corporation increased from $682,053,385 on April 1, 1901, to $1,186,982,038 on December 31, 1910. The excess of capitalization over tangible property investment decreased in the meantime from $720,793,432 to $281,051,222, or by nearly $439,750,000.

It is apparent, therefore, that a considerable part of the "water" in the original capitalization of the Corporation has been eliminated. This comparison, however, does not exactly show the amount of such reduction—first, because it is not claimed that the entire excess of capitalization over tangible property investment in either case is all "water;" and, second, because the capitalization of the Corporation had changed considerably during the interval from April 1, 1901, to December 31, 1910. In the first place, a considerable amount of bonded debt had been retired. On the other hand, a large amount of new bonded indebtedness had been created, or had been assumed, resulting in a net increase in this item. Moreover, in 1903, $150,000,000 of preferred stock was converted into an equal amount of bonds through the so-called "conversion plan," which is fully discussed in Chapter VIII.

The Steel Corporation undoubtedly would contend that there was not a disparity of $281,000,000 between its total capitalization and the actual value of its property at the close of 1910. The total valuation claimed by the Steel Corporation in its balance sheet of 1910 was approximately $1,693,000,000, or about $225,000,000 over and above the outstanding capitalization, as above stated. Of this excess, approximately $164,000,000 was in the form of surplus, and the balance in sundry reserves. This balance-sheet valuation as compiled by the Steel Corporation exceeds the investment as computed by the Bureau by $506,000,000. However, the Corporation's total includes, first, an excessive valuation for its natural resources, particularly ore; and, second, the so-called "merger value" attaching to its various properties because of their combination and coordination under a single control.

With respect to the ore, it is certain that there is no such value in the ore property as the Steel Corporation claims. This has been conclusively demonstrated in the preceding pages, in analyzing the Corporation's appraisal of its ore property in 1907. Furthermore, a large part of whatever actual appreciation has occurred in ore values certainly must have been due to the rapid concentration of ore property in the hands of a few interests, and particularly in the hands of the Steel Corporation itself.

The capitalization of the appreciation in the value of a natural resource, like iron ore, in the absence of competitive ownership, presents a problem of far-reaching importance. Assume, for instance, for the purposes of argument, that the Steel Corporation could prove an actual appreciation in its ore property of, say, $100,000,000. This would mean that a considerable part of such appreciation must be attributed to the concentration of control of such property, since under scattered and competitive ownership there is always a tendency on the part of some holders to sell at a very small profit rather than carry their property without a return thereon and thus to keep down values. If it were conceded that such appreciation could properly be capitalized and used as a basis for distributing profits, then there is nothing to prevent a further recapitalization of this ore property at a still greater appreciation at some time in the future, when the value may be still more greatly influenced by the concentration of control. In this way, it will be seen, a great concern like the Steel Corporation might repeatedly recapitalize its natural resources, and use this capitalization in such a way as to really conceal its true rate of profit. To permit a concern which has acquired control of a very substantial fraction of the total supply of a natural resource, like iron ore, thus to capitalize and recapitalize this property involves, therefore, as just stated, problems of vital interest to the public.

The Steel Corporation attaches great importance to the element of so-called merger value, contending that the mere merging of its various properties under a single control imparts to them collectively a value very greatly in excess of the sum of their respective values as separate entities. It may be conceded that some increase in value is thus brought about. The merging of such properties and their coordination under a single control tends to permit a more economical operation which may fairly be regarded as imparting an additional value to them. A large part of what is ordinarily called merger value, however, is really little more than the increased earning power due to the reduction or elimination of actual or potential competition.

Therefore, it should be apparent that while the merging of various properties under a single control may actually increase their value, and more particularly their earning power, it would be entirely unjustifiable to credit a company having substantial control of an industry, or a high degree of control, with the full amount of such so-called merger value. To allow such a company credit for the full merger value which it might show by reason of increased earnings under these circumstances would involve a fundamental fallacy, since the reasonableness of the earnings themselves must first be established. Under free and fair competition it is generally assumed that the actual rate of earnings is a fair rate. When, however, competition has been substantially eliminated, or restricted, through consolidation, this assumption is no longer valid, and in this case practically the only available test of the reasonableness of the profits is their relation to the actual investment in the property from the operation of which they are derived. Therefore, the Bureau, while admitting that there is a certain element of merger value attaching to the properties of the Steel Corporation, has made no specific addition therefor to the investment in the tangible property as already computed.

In Table 44 there is presented a constructive balance sheet of the Steel Corporation for December 31 of each year from 1901 to 1910, inclusive, compiled by substituting for the inflated property account as shown on the Corporation's books the investment in fixed property as computed by the Bureau. The current liabilities are shown. No surplus is of course shown, because instead the undivided profits retained in the business and added to surplus on the Corporation's books are here used to reduce the item of "intangible considerations and water." It may be noted that the accrued balances of certain contingent and insurance funds carried on the Corporation's balance sheet are not deducted from the investment here, although in discussing profits later the entire amounts set aside from earnings to these funds are allowed. The actual investment at any given time includes of course the amount of such unexpended balances; on the other hand the contingency that they may be needed at any time justifies their exclusion from profits. Of course, as these funds are actually exhausted the investment is correspondingly reduced.

The gross current assets are shown, and not merely the net, these agreeing with the amounts stated in the Steel Corporation's reports. It is necessary, therefore, to deduct the current liabilities in order to arrive at the investment as stated in Table 43.

It may also be noted that the small amount of unacquired stock in subsidiary concerns which in this report has not been treated as a part of the total capitalization of the Steel Corporation is here included.

TABLE 44.—CONSTRUCTIVE BALANCE SHEET OF STEEL CORPORATION, 1901-1910, ESTABLISHED BY SUBSTITUTING BUREAU'S VALUATION OF FIXED PROPERTY FOR CORPORATION'S BOOK VALUATION OF SUCH PROPERTY.

Assets.

	Apr. 1, 1901.	Dec. 31, 1901.	Dec. 31, 1902.	Dec. 31, 1903.	Dec. 31, 1904.	Dec. 31, 1905.	Dec. 31, 1906.	Dec. 31, 1907.	Dec. 31, 1908.	Dec. 31, 1909.	Dec. 31, 1910.
Property account brought forward	....	$545,500,000	$554,904,482	$593,669,888	$622,349,086	$644,148,292	$661,845,238	$691,168,068	$809,051,863	$858,782,464	$880,147,299
Fixed property additions capitalized	....	16,680,384	47,981,699	32,955,359	29,426,372	26,772,767	35,153,984	122,963,251	55,721,497	38,564,178	55,067,584
	....	562,180,384	602,886,181	626,625,247	651,775,458	670,921,059	696,999,222	814,131,319	864,773,360	897,346,642	935,214,883
Estimated true depreciation	....	11,546,368	16,895,812	16,638,147	15,467,872	21,737,883	23,638,674	25,054,991	18,124,196	26,218,981	27,687,195
Less property expenditures not capitalized	....	4,270,466	7,679,519	12,361,986	7,840,706	12,662,062	17,807,520	19,975,535	12,133,300	9,019,638	9,777,713
Net outstanding or accrued depreciation	....	7,275,902	9,216,293	4,276,161	7,627,166	9,075,821	5,831,154	5,079,456	5,990,896	17,199,343	17,909,482
Net property account	$545,500,000	554,904,482	593,669,888	622,349,086	644,148,292	661,845,238	691,168,068	809,051,863	858,782,464	880,147,299	917,305,401
Deferred charges to operations [1]	2,088,027	1,737,456	1,633,391	2,177,046	2,440,739	3,197,723	4,272,622	6,204,734	9,106,666	12,763,191	15,331,705
Investments	241,030	3,871,954	1,874,872	2,412,149	1,920,176	1,180,343	1,617,351	1,717,120	3,083,000	2,353,110	2,369,394
Sinking and reserve fund assets	239	245,319	1,388,862	3,607,448	6,958,449	16,736,553	27,443,945	32,442,402	23,263,035	21,738,953	16,067,905
Inventories [2]	71,852,439	92,325,938	104,390,845	107,976,523	94,812,546	113,387,997	119,897,467	136,188,874	143,179,629	163,811,280	176,537,824
Accounts receivable	50,910,861	40,606,458	48,944,190	34,457,369	36,150,517	49,945,172	58,836,772	58,398,454	34,708,118	56,421,438	44,603,273
Agents' balances	....	....	1,091,319	1,029,470	733,271	787,662	672,576	835,269	711,044	788,654	696,834
Bills receivable	3,280,190	3,121,320	4,153,291	3,139,457	3,124,243	2,984,067	4,203,933	10,193,707	6,201,532	6,711,427	5,540,181
Stocks and bonds	10,168,824	3,765,400	6,091,340	5,985,509	7,141,737	6,587,809	7,720,349	8,831,154	4,823,800	4,764,254	4,410,794
Cash	56,153,066	52,471,147	50,163,173	63,022,561	60,646,427	58,955,914	75,236,809	59,963,849	49,598,053	58,521,113	56,953,514
Total tangible assets	740,194,676	753,049,474	813,401,171	846,156,618	858,076,397	915,608,478	991,069,892	1,123,827,426	1,133,457,341	1,208,020,719	1,239,816,825
Intangible considerations and water	721,328,839	699,929,211	625,569,473	636,098,135	626,687,661	567,249,229	487,597,493	396,161,020	376,191,605	331,474,514	281,671,574
Total	1,461,523,515	1,452,978,685	1,438,970,644	1,482,254,753	1,484,764,058	1,482,857,707	1,478,667,385	1,519,988,446	1,509,648,946	1,539,495,233	1,521,488,399

Liabilities.

Capital stock:											
Preferred	$510,205,743	$510,205,743	$510,281,100	$360,281,100	$360,281,100	$360,281,100	$360,281,100	$360,281,100	$360,281,100	$360,281,100	$360,281,100
Common	508,227,394	508,227,394	508,302,500	508,302,500	508,302,500	508,302,500	508,302,500	508,302,500	508,302,500	508,302,500	508,302,500
Unacquired stock of subsidiary companies	535,407	557,378	215,914	109,114	96,615	90,915	23,400	761,810	640,302	619,002	620,352
Outstanding bonded and debenture debt	362,541,657	362,681,214	360,754,327	568,138,536	571,791,341	567,893,760	562,156,250	600,185,271	593,231,209	606,384,119	596,351,867
Mortgages and purchase-money obligations	21,872,023	17,127,238	9,590,551	5,882,864	4,454,248	5,521,874	4,232,127	5,393,941	4,161,981	2,763,786	3,097,793
Total capital liabilities	1,403,382,224	1,398,798,967	1,389,144,392	1,442,714,114	1,444,925,804	1,442,090,149	1,434,995,377	1,474,924,622	1,466,617,092	1,478,350,507	1,468,653,612
Accounts payable [3]	27,466,680	18,400,156	19,726,686	17,922,048	20,478,150	23,555,291	26,581,941	26,243,236	24,435,039	35,672,196	30,485,091
Bills payable	17,134,803	12,064,047	6,202,502	4,429,484	3,539,135	2,771,218		1,052,747	840,500	827,000	813,500
Special amounts due employees and others	7,622,490	5,253,356	4,485,547	3,941,795	2,416,569	936,159	1,077,292	1,057,496	923,845	862,767	886,122
Accrued interest and unpresented coupons	[4] 5,917,318	4,450,893	5,398,573	6,942,393	7,099,481	7,199,971	7,166,344	7,863,914	7,986,038	8,582,550	7,991,373
Preferred-stock dividends payable		8,928,992	8,929,919	6,304,919	6,304,919	6,304,919	6,304,919	6,304,919	6,304,919	6,304,919	6,304,919
Common-stock dividends payable		5,082,274	5,083,025				2,541,512	2,541,512	2,541,513	8,895,294	6,353,782
Total current liabilities	58,141,291	54,179,718	49,826,252	39,540,639	39,838,254	40,767,558	43,672,008	45,063,824	43,031,854	61,144,726	52,834,787
Total capital and current liabilities	1,461,523,515	1,452,978,685	1,438,970,644	1,482,254,753	1,484,764,058	1,482,857,707	1,478,667,385	1,519,988,446	1,509,648,946	1,539,495,233	1,521,488,399

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[1] Principally advanced mining royalties.

[2] Inventory valuation includes profits accrued to subsidiary companies on materials and products sold to other subsidiary companies and undisposed of at end of year; i. e., intercompany materials were inventoried at cost to the purchasing subsidiary.

[3] Includes accrued labor and taxes.

[4] Includes $2,852,388 accrued dividends of subsidiary companies.

CHAPTER VII.

PROFITS OF THE STEEL CORPORATION COMPARED WITH ITS INVESTMENT.

Section 1. Form of income account.

Having determined approximately the real investment of the Steel Corporation yearly since its organization, it now remains to consider its profits in relation to that investment.

Before making this comparison it is desirable to discuss briefly the form of the income statement of the Steel Corporation, as given in its annual reports, so as to make clear certain rearrangements later made by the Bureau. A copy of this statement for the year 1910, which is substantially representative for all years, follows:

TABLE 45.—PROFIT AND LOSS AND INCOME ACCOUNTS, UNITED STATES STEEL CORPORATION AND SUBSIDIARY COMPANIES, FOR YEAR ENDING DECEMBER 31, 1910.[1]

Condensed general profit and loss account.

Gross receipts: Gross sales and earnings		$703,961,424.41
Operating charges, viz:		
Manufacturing and producing cost and operating expenses, including ordinary maintenance and repairs and provisional charges for depreciation	[2]$553,532,384.83	
Administrative, selling, and general expenses, and employees' compensation under bonus plan (not including general expenses of transportation companies)	17,115,807.27	
Taxes (including allowance for corporation excise tax)	9,161,436.95	
Commercial discounts and interest	3,545,810.90	
	583,395,439.95	
Less amount included in above charges for provisional reserves for depreciation now deducted for purpose of showing the same in separate item of charge, as see below	24,316,596.71	
		559,078,843.24
Balance		144,882,581.17
Sundry net manufacturing and operating gains and losses, including idle plant expenses, royalties received, adjustments in inventory valuations, etc	1,931,327.90	
Rentals received	797,020.24	
		2,728,348.14
Total net manufacturing, producing, and operating income before deducting provisional charges for depreciation		147,610,929.31

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[1] As given in the annual report for that year.

[2] Includes charges for ordinary maintenance and repairs, approximately $41,000,000.

Other income:		
Net profits of properties owned, but whose operations (gross revenue, cost of product, expenses, etc.) are not included in this statement	$338,231.97	
Income from sundry investments and interest on deposits, etc.	2,786,588.68	
		$3,124,820.65
Total		150,735,749.96
Interest charges:		
Interest on bonds and mortgages of the subsidiary companies	7,124,072.96	
Interest on purchase-money obligations and special deposits or loans of the subsidiary companies	139,380.70	
		7,263,453.66
Balance, being the aggregate earnings of the several companies for the year before deducting provisional charges for depreciation		143,472,296.30
Less net balance of profits earned by subsidiary companies on sales made and service rendered account of materials on hand at close of year in purchasing companies' inventories, and which profits have not yet been realized in cash from the standpoint of a combined statement of the business of the United States Steel Corporation and subsidiary companies		2,417,541.79
Earnings for the year 1910, per income account		141,054,754.51
Less allowance for various depreciation funds		24,316,596.71
Net earnings in the year 1910		116,738,157.80

Consolidated income account.

Total earnings of all properties after deducting all expenses incident to operations, including those for ordinary repairs and maintenance (approximately $41,000,000), employees' compensation under bonus plan, provisional allowance for corporation excise tax, and also interest on bonds and fixed charges of the subsidiary companies, per general profit and loss account		141,054,754.51
Less allowance for the following purposes, viz:		
Sinking funds on bonds of subsidiary companies	$2,176,041.18	
Depreciation and extraordinary replacement funds	22,140,555.53	
		24,316,596.71
Net earnings in the year 1910		116,738,157.80
Deduct:		
Interest on United States Steel Corporation bonds outstanding, viz—		
Fifty-year 5 per cent gold bonds	13,803,376.64	
Ten-sixty year 5 per cent gold bonds	9,563,383.89	
Sinking funds on United States Steel Corporation bonds, viz (representing an allowance for depreciation in addition to the $24,316,596.71 deducted above)—		
Annual installment on fifty-year 5 per cent gold bonds	3,040,000.00	
Annual installment on ten-sixty year 5 per cent gold bonds	1,010,000.00	
Interest on above bonds in sinking funds	1,831,089.47	
		29,247,850.00
		87,490,307.80
Less net balance of sundry receipts and charges, including adjustment of various accounts		83,122.98
Balance		87,407,184.82

Dividends for the year 1910 on United States Steel Corporation stocks, viz:		
Preferred	$25,219,677.00	
Common	25,415,125.00	
		$50,634,802.00
Surplus net income for the year		36,772,382.82
Appropriated from surplus net income for the following purposes, viz:		
On account of expenditures made on authorized appropriations for additional property, new plants and construction, and for discharge of capital obligations	15,000,000.00	
Specifically set aside for account of construction expenditures at Gary, Ind., plant	10,000,000.00	
For reserve fund to cover advanced mining royalties	1,000,000.00	
		26,000,000.00
Balance of surplus for the year		10,772,382.82
Undivided surplus on December 31, 1909	95,401,395.51	
Less charges during the year 1910 against the foregoing balance	735,059.66	
		94,666,335.85
Total undivided surplus December 31, 1910, exclusive of capital surplus provided in organization and of subsidiary companies' intercompany profits in inventories		105,438,718.67

The primary purpose of the foregoing statement is, of course, to furnish the stockholders or the investing public such information on earnings and profits as will show the total amount available for interest and dividend distribution, and the amount of surplus remaining. The figures as here given embrace the combined statements of the various subsidiary concerns controlled by the Steel Corporation. The gross sales and earnings, therefore, as given here are the gross receipts from sales of the various products manufactured, *including intercompany operations*, and the gross earnings of the various transportation and miscellaneous companies. From these gross sales and earnings are deducted the manufacturing and producing costs and operating expenses. These manufacturing and producing costs are the aggregate costs of the subsidiary companies, including payments of one subsidiary company to another for materials, and include all the customary items, such as cost of raw materials, labor, and other conversion costs; also the expenditures for ordinary maintenance and repairs discussed in Chapter VI, and, moreover, the "provisional charges for depreciation." Some of these provisional depreciation allowances are, as previously stated, merely charges for the bond sinking funds of subsidiary companies and are not technically a part of this manufacturing and producing cost, nor of depreciation, although treated as such. (See p. 340.) It should be noted that these depreciation charges do not include the so-called depreciation provisions (sinking funds, etc.) of the Steel Corporation itself. All these provisional depreciation allowances, however, are taken out of costs at this point in order to deduct them from profits later in a single group.[1]

The other operating charges comprise administrative, selling, and general expenses (except that general expenses of transportation companies are included under the ordinary operating expenses), provision for employees' bonus funds (see p. 340), taxes, commercial discounts, and interest. From the total of these operating charges there are deducted the provisional charges for depreciation above referred to. After making this deduction the remaining operating charges are deducted from the gross receipts, leaving a balance of operating earnings (without deducting depreciation), to which are added certain sundry gains (or, in some cases, there are deducted certain losses), and rentals. The addition of these items to the previous balance gives what is termed the "total net manufacturing, producing, and operating income, before deducting provisional charges for depreciation."

To this total operating income is added, in turn, the "other income" of the Corporation, which consists of a small amount of profits from miscellaneous properties owned (but the operations of which are not included in the income account), as well as income from sundry investments, interest on deposits, etc. From the total thus reached there are deducted interest on bonds, mortgages, purchase-money obligations, and special indebtedness of the subsidiary companies, the remainder being the profits of the Steel Corporation, exclusive of depreciation charges. A further adjustment is made at this point to allow for what may conveniently be called "deferred intercompany profits" of subsidiary companies. These, as stated on page 340, are bookkeeping profits on transactions between different constituent companies—as, for instance, the sale of ore to a blast furnace—which have not been actually realized, owing to the fact that the finished material into which such products have gone has not yet been sold to outside interests, but is being carried in inventories. In other words, these are what might be termed "locked-up profits."

It should be noted that the amount of deferred intercompany profits deducted in any year in the profit and loss account of the Steel Corporation is not the total amount of such locked-up profits, but the increase from year to year, since in each year that certain deferred profits are released, new profits in turn are locked up. If the operation were shown in complete detail, there would be given a separate item in the profit and loss account showing as an addition to the earnings the amount of the previously deferred intercompany profits which had been released during the year, and another item showing the amount of such profits locked up or deferred during the year, which would be deducted from the year's earnings. Obviously the same net result is arrived at by deducting simply the increase in the amount of these profits locked up over those realized.

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[1] It may be noted that in the earlier reports of the Corporation these provisional charges for depreciation were not included in the manufacturing and operating cost, but merely the charges for ordinary maintenance and repairs. The change in this respect was made beginning with the annual report for 1908.

The deduction of this item of deferred intercompany profits from the net profits gives what the Corporation terms the "total earnings" of the subsidiary companies. From these "total earnings" are then deducted the above-described "provisional charges for depreciation" (previously taken out of manufacturing and producing cost), namely, payments to bond sinking funds of subsidiary companies and to depreciation and extraordinary replacement funds, the latter including in certain years payments to special funds for depreciation, improvements, and construction.

Deducting these provisional charges for depreciation from the "total earnings" leaves the "net earnings" available for distribution upon the securities of the Steel Corporation or for the general purposes of the company. The first deduction from these so-called net earnings is for the interest on the Steel Corporation's bonds and the provision for the sinking-fund requirements thereon.[1] From the remaining sum are paid the dividends on the preferred and common stock, the balance representing the surplus earnings for the year, out of which, in connection with previously accumulated surplus earnings, the Corporation makes its appropriations for capital expenditures or for writing down its property account, or for miscellaneous purposes.

Section 2. Comparative income account of Steel Corporation, 1901–1910.

Having thus briefly described the general character of the items in the Steel Corporation's profit and loss account and income account, a consolidated statement of these accounts, yearly, from 1901 to 1910, is given in Table 46. For convenience the arrangement has been changed somewhat from that used by the Corporation and just given above, particularly in the condensation of items which, for the present purposes, it is not necessary to show in detail, as, for instance, the inclusion under one head of taxes, commercial discounts, and interest. Furthermore, the restatement of entries for provisional charges for depreciation in the reports as published by the Corporation has been avoided in this consolidated account, these provisional charges being shown but once.

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[1] A minor adjustment is made by the Steel Corporation at this point; it is relatively so insignificant as to require no discussion.

TABLE 46.—COMPARATIVE PROFIT AND LOSS ACCOUNT OF UNITED STATES STEEL CORPORATION AND SUBSIDIARY COMPANIES, 1901-1910.

[Figures in italics represent credits.]

	1901 (9 months).	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Gross sales and earnings	....	$560,510,479.39	$536,572,871.38	$444,405,430.56	$585,331,736.20	$696,756,926.01	$757,014,767.68	$482,307,840.34	$646,382,251.29	$703,961,424.41
Manufacturing and producing cost and operating expenses[1]	....	411,408,818.36	409,268,599.41	353,627,315.31	440,013,432.40	517,083,955.02	564,166,777.12	367,735,102.27	483,417,842.21	529,215,788.12
Balance	....	149,101,661.03	127,304,271.97	90,778,115.25	145,318,303.80	179,672,970.99	192,847,990.56	114,572,738.07	162,964,409.08	174,745,636.29
Administrative, selling, general expenses, and employees' bonus funds[2]	....	13,202,398.89	11,942,916.42	[3] 10,314,681.55	11,996,734.94	14,304,110.45	15,945,436.84	12,932,696.13	15,460,613.78	17,155,807.27
Taxes, commercial discounts and interest, and miscellaneous charges	....	5,032,336.74	4,904,935.89	5,698,712.01	6,573,639.55	8,603,568.66	9,449,942.49	8,068,341.26	12,325,806.51	12,707,247.85
	....	18,234,735.63	16,847,852.31	16,013,393.56	18,570,374.49	22,907,679.11	25,395,379.33	21,001,037.39	27,786,420.29	29,863,055.12
Balance	....	130,866,925.40	110,456,419.66	74,764,721.69	126,747,929.31	156,765,291.88	167,452,611.23	93,571,700.68	135,177,988.79	144,882,581.17
Sundry net manufacturing gains and losses	....	3,128,970.71	1,720,043.58	796,838.08	2,758,633.56	3,790,920.81	3,266,209.45	1,488,805.05	3,385,382.24	2,728,348.14
Other income	....	5,426,451.95	3,548,550.17	2,960,111.24	3,298,500.12	5,368,942.93	6,482,740.97	4,298,079.96	3,432,616.63	3,124,820.65
Total income	....	139,422,348.06	115,725,013.41	78,521,671.01	132,805,062.99	165,925,155.62	177,201,561.65	99,358,585.69	141,995,987.66	150,735,749.96

TABLE 46.—COMPARATIVE PROFIT AND LOSS ACCOUNT OF UNITED STATES STEEL CORPORATION AND SUBSIDIARY COMPANIES, 1901-1910—Con.

[Figures in italics represent credits.]

	1901 (9 months).	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Interest on bonds, mortgages, and purchase-money obligations of subsidiary companies	....	$6,113,584.34	$6,553,861.06	$6,573,146.54	$6,710,214.73	$6,561,478.70	$6,492,195.42	$7,401,205.18	$7,887,178.18	$7,263,453.66
Deferred profits of subsidiary companies[4]	....	....	....	....	6,307,189.83	2,739,403.74	9,741,692.51	109,669.94	2,617,395.54	2,417,541.79
	....	6,113,584.34	6,553,861.06	6,573,146.54	13,017,404.56	9,300,882.44	16,236,887.93	7,510,875.12	10,504,573.72	9,680,995.45
Total earnings	$84,787,596.51	133,308,763.72	109,171,152.35	71,948,524.47	119,787,658.43	156,624,273.18	160,964,673.72	91,847,710.57	131,491,413.94	141,054,754.51
Provisional charges for depreciation, viz:										
Sinking funds on bonds of subsidiary companies	536,128.51	624,064.43	1,598,012.48	1,583,116.76	1,689,999.46	1,904,063.50	1,977,761.03	1,588,070.45	1,724,259.65	2,176,041.18
Depreciation and extinguishment funds	2,969,270.66	4,834,710.28	4,599,822.47	3,907,166.55	5,844,981.17	5,857,410.91	6,681,746.03	3,844,214.21	5,884,367.12	....
Extraordinary replacement funds	6,275,966.45	9,315,614.76	9,297,530.89	8,667,044.36	13,587,909.87	15,395,860.64	15,560,237.38	11,532,896.80	16,109,687.21	[6] 22,140,555.53
Special fund for depreciation, improvements, and construction	....	10,000,000.00	[6] 10,000,000.00	....	[7] 2,232,172.00	[7] 7,500,000.00	[7] 3,500,000.00	....	....	....
Total deductions	9,781,365.62	24,774,389.47	25,495,365.84	14,157,327.67	23,355,062.50	30,657,335.05	27,719,744.44	16,965,181.46	23,718,313.98	24,316,596.71
Net earnings for the year	75,006,230.89	108,534,374.25	83,675,786.51	57,791,196.80	96,432,595.93	125,966,938.13	133,244,929.28	74,882,529.11	107,773,099.96	116,738,157.80

Interest on United States Steel Corporation bonds[8]	11,399,999.98	15,187,850.00	19,082,796.38	23,518,292.75	23,697,850.00	23,697,850.00	23,947,850.00	25,197,850.00	25,197,850.00	25,197,850.00
Sinking funds on United States Steel Corporation bonds	1,773,333.33	3,040,000.00	3,797,500.00	4,050,000.00	4,050,000.00	4,050,000.00	4,050,000.00	4,050,000.00	4,050,000.00	4,050,000.00
Total fixed charges	13,173,333.31	18,227,850.00	22,880,296.38	27,568,292.75	27,747,850.00	27,747,850.00	27,997,850.00	29,247,850.00	29,247,850.00	29,247,850.00
Balance	61,832,897.58	90,306,524.25	60,795,490.13	30,222,904.05	68,684,745.93	98,219,088.13	105,247,079.28	45,634,679.11	78,525,249.96	87,490,307.80
Adjustments in sundry accounts			5,378,837.63	*44,625.14*	99,253.78	90,501.19	681,515.52	*94,034.59*	*548,445.08*	83,122.98
Balance	61,832,897.58	90,306,524.25	55,416,652.50	30,267,529.19	68,585,492.15	98,128,586.94	104,565,563.76	45,728,713.70	79,073,695.04	87,407,184.82
Dividends on preferred stock	26,752,538.75	35,720,177.50	30,404,173.41	25,219,677.00	25,219,677.00	25,219,677.00	25,219,677.00	25,219,677.00	25,219,677.00	25,219,677.00
Dividends on common stock	[9]15,251,531.69	20,332,690.00	12,707,562.50			10,166,050.00	10,166,050.00	10,166,050.00	20,332,100.00	25,415,125.00
Total dividends	42,004,070.44	56,052,867.50	43,111,735.91	25,219,677.00	25,219,677.00	35,385,727.00	35,385,727.00	35,385,727.00	45,551,777.00	50,634,802.00
Surplus for the year	19,828,827.14	34,253,656.75	12,304,916.59	5,047,852.19	43,365,815.15	62,742,859.94	69,179,836.76	10,342,986.70	33,521,918.04	36,772,382.82
Surplus for the year as above	19,828,827.14	34,253,656.75	12,304,916.59	5,047,852.19	43,365,815.15	62,742,859.94	69,179,836.76	10,342,986.70	33,521,918.04	36,772,382.82
Balance prior surplus		19,828,827.14	52,874,597.05	41,096,682.36	27,247,978.92	44,313,794.07	54,556,654.01	69,736,490.77	80,079,477.47	95,401,395.51
		54,082,483.89	65,179,513.64	46,144,534.55	70,613,794.07	107,056,654.01	123,736,490.77	80,079,477.47	113,601,395.51	132,173,778.33

TABLE 46.—COMPARATIVE PROFIT AND LOSS ACCOUNT OF UNITED STATES STEEL CORPORATION AND SUBSIDIARY COMPANIES, 1901-1910—Con.

[Figures in italics represent credits.]

	1901. (9 months.)	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Appropriations from surplus for capital expenditures			[10] $17,234,128.58	[10] $8,493,235.58	$26,300,000.00	$50,000,000.00	$54,000,000.00		$15,000,000.00	$25,000,000.00
Reserve to cover possible failure to realize advanced royalties						2,500,000.00		([11])	3,200,000.00	1,000,000.00
Expense in conversion of preferred stock and sale of bonds			6,800,000.00							
Adjustment of surplus		$1,207,886.84	48,702.70	[12] 10,403,320.05						735,059.66
Total		1,207,886.84	24,082,831.28	18,896,555.63	26,300,000.00	52,500,000.00	54,000,000.00		18,200,000.00	26,735,059.66
Balance of surplus as per balance sheet[13]	$19,828,827.14	52,874,597.05	41,096,682.36	27,247,978.92	44,313,794.07	54,556,654.01	69,736,490.77	$80,079,477.47	95,401,395.51	105,438,718.67

[1] Including ordinary repairs and maintenance, but excluding provisional charges for depreciation.

[2] Does not include general expense of transportation companies.

[3] In the 1904 annual report employees' bonus fund is not deducted before determining net earnings. The amount here given includes the fund which makes the treatment consistent with other years.

[4] Profits of subsidiary companies from sales of materials to other subsidiary companies and on hand at the close of the year in the latter's inventories and which the profits have not been realized from the standpoint of a combined statement of the business of the United States Steel Corporation and subsidiary companies. Prior to January 1, 1904, these profits were reported without reference to whether the receiving subsidiaries had converted and shipped the material or whether they carried the material in their inventories

[5] Depreciation and extraordinary replacement funds.

[6] Of this amount $7,667,059.39 was subsequently charged to construction.

[7] Special fund for depreciation and replacement.

[8] Including interest on bonds alive in sinking fund.

[9] Includes $24,901.69 dividends on outstanding stock of subsidiary companies.

[10] Capital expenditures charged to surplus.

[11] During the year this reserve was increased $300,000 and apparently included under the item "Adjustments in sundry accounts."

[12] Of this sum $10,371,803.25 represents a transfer from "Undivided surplus" to "Special surplus," representing profits accrued on sales of material to other subsidiary companies and on hand in latter's inventories.

[13] Exclusive of "Capital surplus" provided in organization and "Special surplus" representing subsidiary companies' intercompany profit in inventories.

Before analyzing this statement of income the general course of the earnings of the Corporation may be noted. On the whole there has been a marked increase in the volume of gross sales and earnings, the total rising from, roughly, $560,500,000 in 1902 to nearly $704,000,000 in 1910; this figure, moreover, was very considerably exceeded in 1907, when the total amounted to $757,000,000.

The "total income" of the Corporation, after deducting the ordinary manufacturing costs, miscellaneous administrative expenses, taxes, and other charges noted in the table, shows a less pronounced change. Thus this total income in 1902 was, roughly, $139,400,000, and but little in excess of $150,700,000 in 1910, an increase of only about 8½ per cent, whereas the gross sales and earnings increased by 25 per cent.

The total net earnings as thus shown by the Corporation's reports, after deducting the provisional charges for depreciation, increased from $108,500,000 in 1902 to over $133,200,000 in 1907; in 1910 they were, roughly, $116,700,000.

The total net earnings, as shown by the Corporation's reports, for the nine and three-fourths years covered by the preceding table amounted to $980,000,000, or an average of almost exactly $100,000,000 per year. The extreme range was from $57,791,197 in 1904 to $133,244,929 in 1907. This comparison well illustrates the pronounced fluctuations which occur in the iron and steel industry. In 1904, which was a year of marked depression, the earnings of the Corporation exceeded its fixed charges and preferred-stock dividend by only about $5,000,000, while in 1907 the excess over these requirements was more than $79,000,000.

Section 3. Revision of income account of Steel Corporation.

If all the items in the Steel Corporation's income account could be accepted for the present purpose without change, then all that would be necessary in order to determine the rate of return on the investment actually employed in the business would be to compare the "net earnings," as given in the preceding table, with the investment as established by the Bureau in Table 43.

Most of the items in the income account can thus be accepted without criticism or change. However, for the purpose of computing the real rate of profit upon the actual investment certain rearrangements and revisions of this income account are necessary. These are shown in Table 47, on page 341. In the first place, the deduction of interest on bonds, mortgages, purchase-money obligations, and similar indebtedness of the subsidiary companies should not be made in computing the rate of return on the investment, because such obligations have been regarded as representing an equivalent addition to the investment and have not been treated as current liabilities. Obviously, since such amounts have been retained in the investment, the amounts paid out from earnings as interest on such indebtedness should be retained in the statement of earnings.[1]

It might be argued, moreover, that such expenditures as the provision for employees' bonus funds should not be deducted from the earnings, but that these provisions should be regarded as in somewhat the same class as dividends paid to stockholders, on the ground that the establishment of these bonus funds is a profit-sharing arrangement. Since, however, the opportunity for sharing in such bonus payments might be regarded as in the nature of additional wages, the deduction as made by the company has been allowed to stand.

A further revision of the earnings is, however, necessary in the case of the provisional charges for depreciation. It will be seen that the Corporation deducts from earnings under this head provisions for sinking funds on bonds of subsidiary companies, and amounts charged to the depreciation and extinguishment funds, to the extraordinary replacement funds, and to special funds for depreciation, improvements, and construction. As already pointed out in Chapter VI, there is no necessary relationship between bond sinking fund provisions and true depreciation, but for convenience the bulk of the amount set aside for sinking funds on bonds of subsidiary companies may be regarded as the equivalent of depreciation. As shown in Chapter VI, however, the various provisional appropriations for depreciation were in excess of necessary allowances, the total excess for the entire period from April 1, 1901, to December 31, 1910, having been computed at $38,285,000. In order to arrive at a correct statement of the earnings, therefore, this excessive amount has been restored by the Bureau.

The item of adjustments in sundry accounts, which in the income statements of the Steel Corporation is made after deducting the interest and sinking-fund provisions from the net earnings, should in this revision be taken account of before establishing the readjusted earnings.

The Bureau has, moreover, restored to the earnings the item of deferred intercompany profits in inventories. It is proper that the Corporation should deduct this from its income in arriving at the net earnings, since these deferred profits have not actually been realized by the sale of the products in question to outside interests. However, such locked-up inventory profits are only tentatively deducted by the Corporation, and in the balance sheet they appear as a suspended surplus, thus indicating an expectation on the part of the

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[1] It will be noted that interest on the Steel Corporation's bonds is not deducted by the Corporation until after the net earnings are established.

Corporation that they will eventually be realized. While, therefore, the deduction of this item is easily justified, on the other hand the Bureau has deemed it proper, and on the whole better, to restore this item to the earnings in computing the rate of return on the actual investment. As already pointed out, the amount of such profits restored in any given year is the increase over the amount "locked up" in the previous year's inventories, and not the entire amount of such profits.

The revisions thus described are carried out in the following table, in which there are added to the net earnings for the year, as given in Table 46, the amounts deducted in that table for interest on bonds, mortgages, purchase money and other similar obligations of subsidiary companies, the increase in the item of deferred intercompany profits, the excess of provisional depreciation charges over what were determined to be proper and necessary provisions, the item of "adjustments in sundry accounts" also being taken into consideration.

TABLE 47.—ACTUAL EARNINGS OF STEEL CORPORATION ON ITS TOTAL INVESTMENT AS COMPUTED BY BUREAU, 1901-1910.

Year.	Net earnings, as shown by annual reports.	Adjustments by Corporation in sundry accounts.	Amounts restored to earnings by Bureau.			Total adjusted earnings.
			Interest on bonds, mortgages, and purchase-money obligations of subsidiary companies.	Locked-up intercompany profits in inventories.	Excessive depreciation allowances.	
1901 [1]	$75,006,230.89	....	[2] $4,500,000.00	(3)	−$1,765,000.00	$77,741,230.89
1902	108,534,374.25	−$1,207,886.84	6,113,584.34	(3)	8,062,272.00	121,502,343.75
1903	83,675,786.51	− 5,427,540.33	6,553,861.06	(3)	9,354,851.00	94,156,958.24
1904	[4] 57,791,196.80	+ [4] 13,108.34	6,573,146.54	−$1,254,336.48	− 631,165.00	62,491,950.20
1905	96,432,595.93	− 99,253.78	6,710,214.73	6,307,189.83	3,480,088.00	112,830,834.71
1906	125,966,938.13	− 90,501.19	6,561,478.70	2,739,403.74	8,216,388.00	143,393,707.38
1907	133,244,929.28	− 681,515.52	6,492,195.42	9,744,692.51	6,616,572.00	155,416,873.69
1908	74,882,529.11	+ 394,034.59	7,401,205.18	426,983.85	1,688,543.00	84,793,295.73
1909	107,773,099.96	+ 548,445.08	7,887,178.18	2,617,395.54	1,981,460.00	120,807,578.76
1910	116,738,157.80	− 818,182.64	7,263,453.66	2,751,307.08	1,281,348.00	127,216,083.90
Total	980,045,838.66	− 7,369,292.29	66,056,317.81	23,332,636.07	38,285,357.00	1,100,350,857.25

[1] Nine months.

[2] Approximated; this amount never computed by the Corporation.

[3] In these years the intercompany profits in inventories were not deducted by the Corporation and hence need not be restored.

[4] After deducting employees' bonus fund, which in this year was taken out after stating net earnings, but which in other years is deducted before determining the net earnings.

The result of these revisions, it will be seen, is an addition of $120,305,019 to the net earnings as given in the published reports, making a total of $1,100,350,857.

Section 4. Comparison of revised earnings of Steel Corporation with revised investment.

The earnings of the Steel Corporation, as thus adjusted by the Bureau, may now be compared with the investment as correspondingly revised. Such comparison is given in Table 48. It will be recalled that the Bureau's figures of investment as here given are for tangible property alone:

TABLE 48.—COMPARISON OF INVESTMENT OF STEEL CORPORATION, WITH TOTAL EARNINGS THEREON, AS ADJUSTED BY BUREAU, YEARLY, 1901-1910.

Year ended Dec. 31—	Total investment in tangible property as computed by Bureau.	Earnings as adjusted by Bureau.	
		Amount.	Per cent.
1901[1]	$698,869,756	[1]$77,741,231	[2]14.8
1902	763,574,919	121,502,344	15.9
1903	806,615,979	94,156,958	11.7
1904	818,238,143	62,491,950	7.6
1905	874,840,920	112,830,835	12.9
1906	947,397,884	143,393,707	15.1
1907	1,078,763,602	155,416,873	14.4
1908	1,090,425,487	84,793,296	7.8
1909	1,146,875,993	120,807,579	10.5
1910	1,186,982,038	127,216,084	10.7
Total		1,100,350,857	
Average	941,258,472	[3]112,856,498	12.0

[1] Nine months, April to December; investment includes additions during this period.
[2] Indicated rate per annum based on actual earnings for nine months.
[3] Average yearly profits for nine and three-fourths years.

The table shows an average rate of return upon the total investment in tangible property for the entire period from April 1, 1901, to December 31, 1910, of 12 per cent. The highest rate was reached in 1902, namely, 15.9 per cent, and in 1906, an unusually prosperous year, it exceeded 15 per cent. In 1904 and 1908, however, which were years of pronounced reaction, the rates fell to 7.6 per cent and 7.8 per cent, respectively. Prior to the formation of the Steel Corporation and other large consolidations, the iron and steel industry was noted for violent changes in the rate of profit, the industry, indeed, having been aptly termed "either prince or pauper." This table shows that so far as the Steel Corporation is concerned the business, although still subject to marked fluctuations in profits, has, even in the most depressed years of this period, shown a substantial return on the actual investment.

The average rate for the first four and three-fourths years was 12.5 per cent, as against 11.6 per cent in the five years from 1906 to 1910. Therefore, in so far as any tendency may be noted, it is toward a lower rate of profit in recent years.

It is important to emphasize at this point that the rate of earnings of a great concern which, like the Steel Corporation, handles more than 50 per cent of the business of the country is not to be judged by the same standard as the rate for a comparatively small concern. Some of the most successful concerns in the steel industry outside of the Steel Corporation show higher rates of return upon their total investments. While, however, some exceptionally efficient or fortunate concerns earn rates in excess of this average, on the other hand a great many companies show very much lower rates on their total investments, while sometimes the business is conducted at a loss. Therefore, an average rate of 12 per cent on the total tangible investment for over one-half of the entire steel business of the country is much more significant than the same rate or even a larger rate for a comparatively small concern. It probably means that the return on a considerable proportion of the business of the country, which under more competitive conditions and more scattered ownership would be conducted at a lower rate of profit, has been considerably increased.

It may also be noted that the investment includes a large amount of idle property, particularly unimproved ore reserves, which, of course, tends to reduce the rate, although the investment in such undeveloped iron-ore property as computed by the Bureau is not so great as to very materially affect the rate of profit. It is, however, worth emphasizing that the rate of profit here given includes not only the iron and steel industry proper, but also the iron-ore mining industry. Prior to the era of consolidation the latter, to a large extent, was distinct from the manufacture of iron and steel, and under the scattered ownership of iron-mining properties then prevailing profits generally are understood to have been comparatively low, on the average. Under present conditions in the iron and steel industry, however, the Lake iron-ore industry is one of the most profitable branches of the business. This factor should be considered, therefore, in comparing the profits of the iron and steel industry at the present time with those obtained under the different conditions formerly prevailing.

The average rate of 12 per cent here given is, as repeatedly pointed out, the rate upon the entire investment in the tangible property. It is, of course, considerably larger than the rate of net profit upon the total issue of capital securities, because this total capitalization greatly exceeds the investment as established by the Bureau. The average capitalization of the Corporation for the entire period (based on the amounts outstanding at the close of each year) was approximately $1,445,000,000. Using the earnings as revised by the Bureau, the average rate on this average capitalization would be 7.8 per cent.

The capital securities of the Steel Corporation, however, include a large amount of bonds upon which the return is fixed, in most cases at 5 per cent. If the bonds of the Corporation had been issued only for an equal amount of property or cash in every instance, an amount equal to the total bonded indebtedness (including purchase-money obligations and mortgages) could be deducted from the investment as computed by the Bureau, leaving what may be termed as the investment contributed by the stockholders or represented by the capital stock. If the earnings after deducting interest on the bonded debt were compared with such remaining portion of the total investment, the rate would be considerably in excess of 12 per cent. Such a comparison can not, however, be presented in a satisfactory way, particularly because the bond issues did not always represent an equivalent addition to the investment. In the case of the acquisition of the Carnegie Company in particular, over $300,000,000 in bonds were issued for Mr. Carnegie's interest alone, whereas the total tangible assets of the Carnegie Company a year earlier apparently were not much, if any, in excess of $160,000,000. (See p. 159.) Therefore, to deduct the total indebtedness from the true investment would leave an unduly low remainder for the capital stock and unfairly exaggerate the rate of profit on that part of the true investment which may be considered as contributed by the stockholders.

Consequently the Bureau does not attempt to give in definite figures the rate of profit earned by the Steel Corporation on the true investment represented by its capital stock, but merely calls attention to the fact that the rate of profit above shown is not the rate earned on that part of the true investment which may be considered as contributed by the stockholders, but a lower rate earned on the total true investment and accruing to the stockholders and bondholders combined.

Section 5. Portion of Steel Corporation's earnings accruing to the benefit of the stockholders.

The preceding comparison of earnings with the actual investment affords what is perhaps the best single available test of the earning power of the Corporation and of the reasonableness of its profits. As already shown, a comparison of the earnings with the total capitalization would mean little, because, particularly in earlier years, the capitalization was far in excess of the actual investment, and still is materially in excess of that investment. It is, however, of decided interest to analyze the disposition of the earnings of the Corporation from the standpoint of the stockholders and with especial reference to the position of the common stock. Such an analysis shows that whereas at the outset the common stock represented no real value whatever it has nevertheless received a substantial return in dividends. Moreover, there has been built up by the great increase in investment a considerable equity for the common stock.

Of course most of this equity is not in a form in which it can be distributed as dividends, because most of the earnings accruing to the benefit of the common stock have been reinvested in fixed property, either new plants, or new ore, coal, and similar properties. Nevertheless, the reinvestment of these earnings means that an equity for the common-stock holders in the property has been created, and that meanwhile a great investment is being utilized to produce profits of which only fixed amounts are distributed to the holders of bonds and preferred stock, while the remaining amounts may be applied to dividends on the common stock.

In computing the amount of the earnings accruing to the benefit of the common-stock holders, the Bureau has included the amounts set aside by the Steel Corporation itself for sinking-fund requirements. While these amounts obviously will not accrue directly to the stockholders in a form available for dividends, because the bond indentures require absolutely that such sinking-fund payments shall be made, yet they represent an addition to the equity back of the stock as truly as the earnings reinvested in fixed property. In the one case, the addition to the equity is direct, through the construction of additional plants or the addition of more physical property. In the other case it is indirect, by reducing the indebtedness against the property. Therefore, the earnings accruing to the benefit of the stockholders have been regarded as the entire earnings, as revised in Table 47, less only interest on the bonds and similar indebtedness of the Steel Corporation and of its subsidiaries.

The total amount of earnings accruing to the benefit of the stockholders for the entire period from 1901 to 1910, as thus determined, is $816,430,854, of which amount $393,951,787 was actually paid out in dividends, as follows:

TABLE 49.—AMOUNT OF EARNINGS OF STEEL CORPORATION, 1901–1910, WHICH DIRECTLY OR INDIRECTLY HAVE INCREASED THE EQUITY OF THE STOCKHOLDERS IN THE PROPERTY.

Total earnings, as revised by the Bureau		$1,100,350,857
Deduct—		
Interest on bonds, etc., of subsidiary companies	$66,056,318	
Interest on United States Steel bonds (less interest on bonds in sinking funds)	211,063,685	
Commission to bankers under bond-conversion plan	6,800,000	
Total		283,920,003
Balance accruing to benefit of stockholders		816,430,854
Amount actually paid out in dividends:		
Preferred stock	[1] 269,439,530	
Common stock	124,512,257	
		393,951,787
Amount reinvested in fixed property and other assets, or applied to sinking funds on United States Steel bonds, and accruing to benefit of stockholders		422,479,067

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[1] Including $24,902 paid out on stocks of subsidiary companies in 1901.

The total of the amounts reinvested in the property and the amounts applied to sinking funds on bonds of the Steel Corporation, namely, $422,479,067, which represents an equity accruing to the benefit of the stockholders, does not include $20,092,728 of sundry reserve funds on the books on December 31, 1910. Of this figure, $8,402,999 represented insurance funds, and the balance, $11,689,729, contingent and miscellaneous operating funds. So far as the insurance funds are concerned, these under certain conditions (i. e., the dissolution of the Corporation) might fairly be considered as an addition to the equity built up in the interest of the stockholders. In the case of the contingent and miscellaneous funds, however, it might be incorrect to treat them in the same manner. Adding the insurance funds to the above figure would give a total equity of rather more than $430,000,000.

In other words, the capital stock of the Corporation, over $720,000,000 of which at the organization of the Corporation (see p. 239) represented no tangible value whatever, and much of which was mere "water," has received during the period from April 1, 1901, to December 31, 1910, nearly $400,000,000 in cash dividends, while, in addition, $422,479,000 more of the earnings of the Corporation (this excluding the sundry funds above referred to) went directly or indirectly to enhance the equity accruing to the holders of the stock.[1]

Had the preferred stock originally been fully covered by tangible property value this entire equity thus built up might be considered as accruing to the benefit of the common-stock holders. Since, however, as shown on page 240, a considerable portion of the preferred stock in 1901 had no tangible property back of it, to this extent this increase in the equity can not be considered as belonging to the common-stock holders.

Opinions as to whether the dividends paid out to the common-stock holders, together with the equity built up for them in the property of the Corporation, were excessive or not must depend finally upon opinions respecting the reasonableness of the average profit of 12 per cent on the total investment as computed above. If that rate be accepted as reasonable and proper for a concern like the United States Steel Corporation, then the distribution of this amount among the various classes of security holders is a subordinate consideration, particularly as the voting power is not restricted to any small or selected group of security holders, who thereby might exploit the earnings to their own advantage. If, on the other hand, the average rate of 12 per cent on the total investment be regarded as unreasonably high, then the large equity built up in the interest of the stockholders must, to some extent at least, be regarded as representing an undue exaction from the consuming public.

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[1] In 1903, $150,000,000 preferred stock was exchanged into a like amount of bonds; this, however, does not affect this discussion.

In judging of the reasonableness of this rate of 12 per cent profit on total investment, all the circumstances of the case should be considered, and in particular the following: (1) That the Corporation was not one of a number of nearly equal competitors, but rather one which controlled a very large proportion of the total business of the country, and one which possessed in addition certain quasi monopolistic features, both of which circumstances tended to reduce risk; (2) that, as in all great companies of this type, the stockholders as a class had no real responsibilities of management, while the broad market for the stock enabled them to invest therein or sell out their holdings at current market values without difficulty; and (3) that when the profit on that part of the actual investment which was put in for shares of the capital stock (as distinguished from bonds) is considered it was at a considerably higher rate than 12 per cent. (See p. 344.)

CHAPTER VIII.

THE BOND-CONVERSION PLAN OF 1902–3.

Section 1. Description of plan and terms.

In April, 1902, or just about a year after the organization of the United States Steel Corporation, announcement was made that the board of directors had approved plans for converting $200,000,000 of the 7 per cent preferred stock of the company into 5 per cent bonds. As a part of this conversion plan it was also proposed to sell $50,000,000 of bonds to reimburse the treasury for expenditures previously made to retire certain current obligations, and to secure additional working capital for the Corporation.

The terms of the plan were in substance as follows: An issue of $250,000,000 five per cent 10–60 year sinking-fund gold bonds was to be authorized. Of this amount, $200,000,000 was to be paid for in preferred stock exchangeable at par, the additional $50,000,000 to be sold for cash, also at par. Each holder of preferred stock was to have the right to subscribe for the new bonds to the extent of one-half his holdings of that stock (there being outstanding, roughly, $500,000,000 of preferred stock, or twice the amount of the bond issue proposed). These subscriptions were to be payable as follows: 80 per cent in preferred stock and 20 per cent in cash; that is to say, a holder of 100 shares of preferred stock of a par value of $10,000 could subscribe for $5,000 of the new bonds at par and pay for them by depositing 40 shares of his preferred stock, of a par value of $4,000, and $1,000 in cash. The stockholders also had the option of exchanging such 40 per cent of their holdings of preferred stock without subscribing for any of the new bonds in cash. A syndicate was, however, formed, under the management of J. P. Morgan & Co., to underwrite the sale of $20,000,000 of bonds for cash at par and to guarantee the exchange of $80,000,000 of preferred stock. A copy of the syndicate agreement appears elsewhere. (See p. 400.) This did not mean that the syndicate was compelled to surrender $80,000,000 of stock or to subscribe $20,000,000 of cash, in addition to subscriptions by other stockholders. It simply guaranteed that in all $80,000,000 of preferred stock would be deposited and that $20,000,000 of bonds would be paid for in cash. To the extent that stockholders outside of the syndicate made such deposits, the syndicate's obligation was reduced.

It will be seen, therefore, that the plan did not really insure the raising of more than $20,000,000 of the $50,000,000 cash capital which, according to the official announcement, was urgently needed.

An important feature of the arrangement, and one which proved productive of intense dissatisfaction, was a provision that the underwriting syndicate should receive a commission of 4 per cent on all bonds issued, whether for cash or in exchange for preferred stock, and, furthermore, regardless of whether such bonds were exchanged by members of the syndicate or by individual stockholders of the Corporation. Of this 4 per cent commission 20 per cent, or one-fifth, was to be retained by J. P. Morgan & Co., syndicate managers. (See sec. 3.)

The plan was submitted to the stockholders of the Corporation at a meeting held on May 19, 1902, and was approved by an overwhelming majority of the stock represented.[1]

Several suits were, however, immediately instituted to prevent the execution of this plan. Eventually all of this litigation was swept aside, but it forced a postponement of the plan for about a year. On March 3, 1903, J. P. Morgan & Co., acting on behalf of the Steel Corporation, renewed the offer of exchange on the terms above outlined, with the necessary changes in dates.

Section 2. Extent of conversion operations.

At the time the conversion plan was first announced, in April, 1902, the syndicate members deposited with the syndicate managers $80,000,000 preferred stock, and it appears that this stock was allowed to remain in the hands of the syndicate managers during the time the plan was delayed by litigation. There were deposited by stockholders outside of the syndicate, either at the time the plan was originally announced or under the offer as renewed a year later, $45,200,000 of preferred stock.[2] There were no cash subscriptions to new bonds on the part of individual stockholders outside of the syndicate (except for the trifling amount of $12,200), since the bonds

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[1] The vote was as follows:

	Shares.
Preferred stock:	
In favor	3, 750, 596
Opposed	4, 865
Common stock:	
In favor	3, 966, 232
Opposed	7, 675

The great bulk of the vote in favor was by proxy. Excluding proxies obtained by the directors, the vote was as follows:

	Shares.
Preferred stock:	
In favor	2, 818
Opposed	4, 865
Common stock:	
In favor	1, 905
Opposed	7, 675

[2] Annual report of the Steel Corporation for 1903.

at the outset sold (on a "when-issued" basis) slightly under par and were selling by March, 1903, when the plan was formally put in operation, at only 88. The preferred stock was selling in April, 1902, when the plan was first announced, at 94; by the time the offer was renewed the price had dropped to about 85.

Under the offer as renewed, the right to exchange preferred stock for bonds, so far as shareholders outside of the syndicate were concerned, was to cease on May 16, 1903. The underwriting syndicate, however, could make such exchange until July 1, 1904; in other words, for a period of 13½ months after this privilege was terminated with respect to the stockholders outside the syndicate. It is true that the individual stockholders had been given for a limited period a preferential opportunity to exchange their preferred stock for bonds. That is to say, had every holder of preferred stock outside of the syndicate elected to exchange 40 per cent of his preferred stock for bonds, then the syndicate would have been able to exchange only a part (about 40 per cent) of the $80,000,000 which it had deposited with J. P. Morgan & Co. As just shown, however, only about $45,200,000 of preferred stock was deposited by the shareholders outside the syndicate up to May 16, 1903, when the privilege was terminated so far as these stockholders were concerned. On the other hand, the syndicate, under its arrangement, was to be allowed to continue such exchanges up to July 1, 1904.

The exclusive extension of this privilege to the underwriting syndicate for this period resulted in intense dissatisfaction. This was greatly aggravated because the margin between the price of the bonds and the price of the preferred stock continued to widen, so that the syndicate was able to make a large profit by buying the preferred stock in the market and immediately turning it into bonds worth a higher price. (As shown elsewhere, the profit on this operation may have been more than offset by a loss on the syndicate's cash subscription to $20,000,000 bonds.) In October, 1903, the margin between the price of the bonds and the price of the preferred stock was about 12 points. In November it widened out to 15 points, the preferred stock selling below 50, whereas the lowest price for the bonds was 65.[1] This meant that the syndicate, which had the exclusive right to continue the conversion, could, by buying preferred stock in the open market and immediately exchanging it for the new bonds, make a profit of $12 to $15 on every share thus purchased and exchanged. The total amount of the stock purchased by the syndicate appears to have been about 248,000 shares. (See p. 355.)

The fact that the privilege of such exchange was confined to the underwriting syndicate, as well as other features of the plan, aroused widespread disapproval. As a result, on November 19, 1903, the arrangement was abruptly terminated.

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[1] Still later there was a further widening of the margin, due to an advance in the bonds, but the arrangement was abandoned soon after this. (See p. 356.)

Section 3. Results of conversion plan.

Results to the Corporation.—The conversion plan, it will be recalled, purported to provide for the exchange of $200,000,000 of 7 per cent preferred stock into a like amount of 5 per cent bonds, thereby substituting an interest charge of $10,000,000 for dividend requirements of $14,000,000, and also for the sale of $50,000,000 of bonds to provide cash, which was apparently much needed, thereby increasing the interest charges by $2,500,000. One result of this plan, therefore, had it been carried out in its entirety, would have been the substitution of $12,500,000 of interest for $14,000,000 of dividends, or a net saving to the Corporation of $1,500,000. On the conversion alone the saving would have been $4,000,000.[1] As already seen, however, this object was by no means realized. The total amount of bonds issued under this conversion plan was stated by Chairman Gary, at the time the syndicate agreement was terminated, as follows:

$146,388,500	bonds have already been issued in exchange for stock received and canceled.
3,611,500	remain to be issued in exchange for preferred stock to be converted by the syndicate.
2,902,000	bonds sold at par for cash and paid for in full October 1 and already issued.
17,098,000	bonds sold at par for cash upon which 25 per cent was paid to the Corporation October 1 and which will be issued whenever the remaining 75 per cent shall be called for and paid.
170,000,000	total issue outstanding.

The arrangement was further described in the second annual report of the Corporation as follows:

> Up to December 31, 1903, there had been issued and were outstanding United States Steel Corporation 10–60 year 5 per cent sinking fund gold bonds, dated April 1, 1903, for the aggregate principal sum of $152,902,500. These bonds were issued in payment for 1,500,000 shares of preferred stock at par, as well as in consideration of $7,177,100 cash received from J. P. Morgan & Co., for a syndicate, being part of $20,000,000 cash receivable under the contract of April 1, 1902, approved by the stockholders in special meeting May 19, 1902, and thereafter sustained by the courts. Since January 1, 1904, and up to the date of the writing of this report, there have been received from J. P. Morgan & Co. $3,822,900 additional on account of the aggregate of $20,000,000 cash receivable as above, and there have been issued additional bonds of the par value of $5,097,500, making at this date (March 1, 1904) a total issue of bonds for the aggregate principal sum of

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[1] This does not take account of the necessity of an annual sinking fund provision, nor of the 4 per cent commission to the syndicate.

> $158,000,000. Thus the Corporation has received from J. P. Morgan & Co. for the syndicate $11,000,000 in cash and has delivered $8,000,000 in bonds, leaving $9,000,000 cash to be received and $12,000,000 bonds to be delivered.
>
> The Corporation has the right at its option at any time to call for the remaining $9,000,000 cash, but in order to avoid the unnecessary burden of interest upon bonds issued for money not immediately needed, arrangements have been made with J. P. Morgan & Co. whereby, until otherwise provided, the Corporation will not be required to call the remaining $9,000,000 cash or to deliver bonds therefor except when and as the cash shall be needed by the Corporation. Interest on these bonds begins to run only as and when the Corporation receives cash for them. Under Article Third of the contract, Messrs. J. P. Morgan & Co., representing the syndicate, have received, or will receive, as compensation 4 per cent upon the par of $170,000,000 bonds, for which there have been sold to and received by the Corporation 1,500,000 shares of preferred stock at par, besides the $20,000,000 in cash received or receivable as above stated.

It will be seen, therefore, that the plan fell far short of accomplishing what it was designed to accomplish. Instead of providing $50,000,000 new cash (or, after deducting the syndicate's commission of 4 per cent, a net amount of $40,000,000) the total new cash raised was only $13,200,000, this amount being arrived at by deducting from the $20,000,000 cash subscribed by the syndicate the 4 per cent commission on the total of $170,000,000 of new bonds issued, or $6,800,000. Moreover, only a portion of this cash had been paid in to the Corporation at the end of December, 1903, whereas, according to the circular announcing the conversion plan in April, 1902, $50,000,000 of cash was desired in the immediate future. The annual dividend requirements of the Corporation had been reduced by $10,500,000 through the exchange of the $150,000,000 of 7 per cent preferred stock for the 5 per cent bonds, but interest charges had been increased $8,500,000 by reason of the issuance of a corresponding amount of 5 per cent bonds plus $20,000,000 additional bonds sold for cash. There was, therefore, a net reduction in the combined charges of $2,000,000 per annum. This reduction, however, had been accomplished only by substituting a bonded debt for a stock liability, and at an initial cash expenditure of $6,800,000 for commissions.

Results to the syndicate.—The results of the bond-conversion plan to the underwriting syndicate can only be estimated, since it is not known what the stock deposited by syndicate members cost them, or what profit was made on the purchase of preferred stock in the open market by the syndicate for exchange into bonds.

It will be recalled that the syndicate originally deposited $80,000,000 of preferred stock and the outside stockholders $45,200,000, leaving $24,800,000 to be purchased in the open market by the syndicate (the total amount of preferred stock exchanged being $150,000,000).

The preferred stock, at the time it was originally deposited by the syndicate members, was worth, as already stated, about 94. The 5 per cent bonds, at the time the syndicate was finally wound up in May, 1904, were quoted at about 73. On this basis alone (which is not wholly conclusive), there was a loss of 21 points on each share of preferred stock exchanged by the syndicate, or $16,800,000 in all. Against this, however, must be placed the syndicate's commission of $6,800,000, and the profits which it made on the purchase of preferred stock in the open market for exchange into bonds; deductions would then have to be made for certain expenses of the syndicate. The amount of the profit made on such purchases of preferred stock in the open market is not definitely known. Just before the conversion arrangement was terminated, in the latter part of November, 1903, there was a possible profit of nearly 15 points on such conversion operations. As shown later, very heavy purchases of the preferred stock were made in the open market at just about this time, and it is reasonable to assume that a considerable part of such purchases were for the account of the syndicate, because of the large profit possible on such operations. An allowance of $15 per share as the average profit on such open-market conversion operations would, however, probably be too high. Assuming that the profit may have averaged as much as $10 per share for the preferred stock exchanged, the syndicate's profit on this part of the transaction would have been, roughly, $2,500,000, in addition to which there would have been some interest receipts; but, on the other hand, there would have to be deducted the expenses of the syndicate. Assuming that the net profit on the preferred stock purchased for exchange into bonds was only $2,000,000, the indicated loss of $16,800,000 above referred to would have been reduced, after also taking account of the $6,800,000 commission, to $8,000,000. It may be noted that some estimates of the syndicate's loss published in financial journals about this time ranged in the neighborhood of this figure.

It is, of course, somewhat arbitrary to calculate the results to the syndicate on the basis of the value of the bonds on the day the syndicate agreement was terminated. Some of the bonds had been delivered to syndicate members prior to that date, while the value of those received at that time might perhaps be better expressed by taking the average market price over a considerable period of time. Thus the average price of these bonds during the remainder of the calendar year 1904 was approximately 81, or 8 points above the price used in the foregoing calculation. If the bonds had been disposed of at such an average figure, the indicated loss would of course, be correspondingly reduced.

Any calculations of the results to the syndicate, however, are necessarily somewhat inconclusive. The conversion operations were accompanied by pronounced depression in the steel industry and there can be little doubt that the preferred stock would have declined heavily even had the conversion plan never been undertaken. Viewed from this standpoint, it might be argued that the syndicate members (and individual stockholders as well), in proportion as they exchanged preferred stock for a bond worth from 10 to 15 points more, reduced a loss which they might otherwise have suffered. On the other hand, in recent years the preferred stock of the Steel Corporation has sold well above these bonds (both issues, moreover, having sold for a long time well above par), so that viewed from this point it might be argued that the stockholders and syndicate members who exchanged their preferred stock had lost a possible profit in this operation. Against any sacrifice of future profit which might have been made by retaining the 7 per cent preferred stock, however, those who exchanged that issue at all times enjoyed the advantages afforded by a security which preceded that issue, while, moreover, the bonds for a considerable time sold at higher prices than the preferred stock.

Section 4. General criticism of the conversion plan.

While the courts of final resort decided every suit brought against the conversion plan in favor of the United States Steel Corporation, their decisions really had almost nothing to do with the merits of the plan itself. The courts passed almost exclusively on the legal rights of the Corporation. On the question of the propriety of the plan the courts simply held that, in the absence of fraud, they could not go back of the action of the directors of the Corporation. They held that there was no evidence of fraud. This, however, is aside from the question of the advisability or wisdom of the plan.

The wisdom of substituting a bond issue for a portion of the preferred stock may be left to individual opinion. The question whether the company should have postponed the payment of dividends on the common stock and thus have avoided issuing bonds for cash may likewise be passed over at this late day, and particularly since these are matters which concern the stockholders rather than the general public. Some features of the plan, however, are of general interest both as bearing upon the organization and financing of corporations, and also because they had a direct bearing through the stock market on the security market in general, and thus tended directly to affect the general public. Particular mention may be made of the arrangement with the underwriting syndicate and its compensation. It will be recalled that whereas the holders of the preferred stock outside the syndicate were permitted to deposit preferred stock in exchange for bonds only during the period from March 16 to May 16, 1903, the syndicate was, under the terms of the contract, as renewed, permitted to make such exchange up to July 1, 1904. After the offer had been terminated with respect to the shareholders outside the syndicate, in view of the fact that such shareholders took advantage of the offer only to a limited extent, the decline in the market price of the preferred stock worked to the advantage of the syndicate, since it could buy that stock and convert it into bonds at a higher price. While the bonds themselves declined greatly in value the preferred stock fell so much faster that there was a large profit for the syndicate (with respect to this part of the arrangement) in thus purchasing preferred stock and exchanging it into bonds. As already shown, when the plan was first announced, in April, 1902, the new bonds were quoted at only a fraction under par, and the preferred stock at 94. By the time the plan was actually put in operation, in March, 1903, the preferred stock had dropped to about 86. The bonds, however, had fallen to about 87, so that there was only a small margin between them. The relationship of the two prices was substantially maintained up to May 16, 1903, when the subscription privilege of preferred stockholders outside the syndicate was terminated, both the stock and the bonds being quoted on that date at about 83. By July 1, however, the stock had fallen to 81, the bonds remaining unchanged at about 83, thus showing a difference of about 2 points. By the first of October this margin had increased to about 10 points, and by the end of the month to over 12 points, while by the middle of November, or just before the contract with the syndicate was terminated, it had widened out to about 15 points. During the entire interval from May 16, 1903, to November 19, 1903, on which date the arrangement was terminated, the syndicate had the exclusive right of conversion. Obviously there was a heavy profit in thus purchasing preferred stock at from 10 to 15 points below the price of the bonds and making the conversion. It has already been shown that the syndicate apparently purchased something like 248,000 shares of preferred stock in addition to the amount originally deposited by it. Apparently the great bulk of this stock was purchased during the interval when the margin between the price of the bonds and the price of the stock was abnormally wide. Very convincing evidence to this effect is furnished by the fact that on October 22, 1903, the United States Steel Corporation, in making application to the New York Stock Exchange to have these bonds listed on the exchange, stated that there had been issued up to that time $133,295,500 of the new bonds, of which amount $130,411,000 had been issued in exchange for preferred stock to be retired (the balance having been sold for cash to the syndicate). As above shown, when the syndicate agreement was terminated by the Corporation, the amount of preferred stock exchanged or which could be exchanged was $150,000,000. Therefore, the evidence is very strong that during this interval between October 22, 1903, and November 19, 1903, approximately

$20,000,000 worth of preferred stock, or 200,000 shares, were purchased in the open market by the syndicate for exchange. During this interval there were very heavy transactions in the preferred stock, the total for the four weeks ended October 19 exceeding 2,000,000 shares, while the margin between the preferred stock and the bonds ranged generally from 12 to 15 points, occasionally being somewhat greater.

As already stated the privilege of the syndicate to make such conversion operations was terminated on November 19, 1903. The following statement was given out by E. H. Gary, chairman of the Corporation:

> At a meeting of the finance committee of the United States Steel Corporation held yesterday it was (by unanimous vote) decided to suggest to Messrs. J. P. Morgan & Co. that the syndicate contract for the conversion of preferred stock into second-mortgage 5 per cent bonds should be canceled and terminated beyond the amount of $150,000,000, which figure has very nearly been reached.
>
> Messrs. J. P. Morgan & Co. immediately acceded to the request of the finance committee and no further exchanges will be made for account of the syndicate beyond the amount stated.

It was reported that this sudden termination of the agreement was prompted by the threat of injunction proceedings against the Corporation. However that may have been, the vigorous condemnation of the plan by the press was involving the Corporation in exceedingly unpleasant notoriety, and there can be little doubt that the abandonment of the arrangement was in response to this disapproval. (See pp. 350–351.)

While the evidence, therefore, indicates that the syndicate purchased a very large quantity of preferred stock during the period when it was selling at a wide margin under the price of the bonds, this in itself does not show that the syndicate was directly responsible for the pronounced depression of the stock. Such charges would, of course, be almost impossible of proof. It is, however, worth noting that the suspicion was very widely entertained in Wall Street at the time that the syndicate was not merely taking advantage of a pronounced decline in the preferred stock, but that it had actively assisted in bringing about this decline. The mere fact that there was a special inducement to indulge in such manipulation and that the syndicate would be the sole beneficiary at the expense of the remaining stockholders is alone a very telling criticism of this feature of the plan.

Complaint was also made that the 4 per cent commission to the syndicate was excessive. Opinions on this question depend chiefly of one's views as to the general merit of the plan of exchanging preferred stock into bonds. If the conclusion be reached that the substitution of $150,000,000 of 5 per cent bonds for a like amount of 7 per cent preferred stock was in itself desirable and advantageous to the Corporation, then the payment of $6,800,000 in the form of a 4 per cent commission on this portion of the bond issue could perhaps be defended. If, however, such substitution of bonds for stock is regarded as inadvisable, then the payment of the 4 per cent commission for effecting such exchange becomes open to objection. It amounted, on this assumption, to the payment by the Corporation of $6,800,000 to the syndicate for raising $20,000,000 of cash; in other words, a commission of 34 per cent. Viewed in this light alone, it is impossible to avoid the conclusion that the commission was grossly excessive.

Without attempting to pass on this feature of the plan, it seems clear that the exclusive privilege allowed the syndicate of converting preferred stock into bonds was undesirable and unjustifiable. Certainly for the time being it seriously hurt the prestige of the Corporation.

Reasons for the conversion plan.—There has been a great deal of discussion as to why the directors of the Steel Corporation decided upon this conversion plan. One of the most probable reasons for its adoption is that the financial interests identified with the Corporation found that its enormous capitalization acted as a wet blanket upon the stock market at all times and, furthermore, that it constituted a very serious potential menace in the event of a sudden panic. Although the preferred stock of the Corporation was paying 7 per cent dividends, it was at that time regarded by conservative investors as distinctly a speculative security. Indeed, during the depression in the iron and steel industry in the winter of 1903–4, when the dividend on the common stock was first cut in two, and later suspended altogether, there were very grave fears that the Corporation would not be able to maintain dividends on even the preferred stock. This feeling among conservative investors undoubtedly prevented a rapid distribution of the preferred issue by banking interests who were carrying large amounts of this stock. A 5 per cent bond, on the other hand, might appeal more strongly to the investing class, and thus might afford a means for relieving the stock market of the pressure of the enormous capitalization of the Corporation to that extent. That is to say, if a large amount of the preferred stock of the Corporation then "on the market" could be withdrawn, exchanged into bonds, and placed with investors who would be disposed to hold the latter without much regard to temporary fluctuations in market conditions, the financial operations of banking interests in other directions would be facilitated to this extent. A special point in this connection is that some of the large insurance corporations, and other institutions of a similar character, might naturally be more ready to purchase a bond than preferred stock. There seems to be little doubt that this was a primary motive underlying the adoption of the conversion plan.

Another explanation sometimes advanced is that the plan was largely designed to increase the value of the common stock by reducing the prior charges. Some of the leading interests in the Steel Corporation claimed to be large owners of the common stock. It is difficult to believe, however, that this could have been a very important consideration in the minds of the directors, since the substitution of a bonded debt for the preferred stock can hardly be regarded as likely to improve the standing of the common stock with investors generally. It is true that the new bonds contained a provision to the effect that foreclosure proceedings could not be instituted under them until there had been a failure for a consecutive period of two years to pay interest. It is also true that the conversion operations reduced the charges coming ahead of the common stock. However, the influence of a bond issue is ordinarily more adverse to the common stock than that of an issue of preferred stock, and it hardly seems probable that the possibility of enhancing the value of the common stock was an important factor in bringing about this conversion plan.

Still another explanation offered for this plan was that it was a deliberate scheme to enable the underwriting syndicate to "milk" the Corporation.[1] While the anticipated profit of the syndicate undoubtedly was an important consideration, and while, as already pointed out, such underwriting profits were a very conspicuous feature of the consolidation movement in the steel industry throughout, it hardly seems reasonable to assume that the primary object of the directors of the Corporation in adopting this conversion plan was to secure a large profit for an underwriting syndicate of which only a part of them were members. While open to several serious objections, it seems more probable that the syndicate arrangement was an incident of the plan and not its chief object.

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[1] Thus one writer in discussing this plan said:

> It seems perfectly clear that an important motive for this transaction was to secure a large profit to prominent bankers who were represented at the same time on the board of directors of the Steel Corporation. (W. Z. Ripley, Quarterly Journal of Economics, February, 1905.)

CHAPTER IX.

RELATIVE POSITION OF THE UNITED STATES STEEL CORPORATION IN THE STEEL INDUSTRY.

Section 1. Comparison of Steel Corporation's production of principal products with that of independent concerns.

It is clear that the United States Steel Corporation at its organization, in 1901, overshadowed not only any individual competitor in the industry in the United States but all competitors combined. Since its organization the Corporation, as shown, has acquired several important independent concerns, and has also very greatly increased its capacity by the erection of new plants and the modernization and enlargement of old ones. Notwithstanding the resulting great expansion in the absolute volume of its business, however, the Corporation, from a manufacturing standpoint, has not increased its proportion of the total output of the country. On the contrary, in the case of several products, it has actually failed to maintain the position which it held in 1901. With respect to the ownership or control of raw materials, and particularly of ore, the case, as shown later (see sec. 6) is very different.

The production of the Steel Corporation, yearly, since its organization, has already been given in Table 30, on page 270. In Table 50, below, the Corporation's output of principal products, from 1901 to 1910, is compared with the combined output of independent companies, the total for the country also being given. These figures have been compiled from the annual statistical reports of the secretary of the American Iron and Steel Association, a recognized authority. It will be noted that the classification of products by the American Iron and Steel Association is somewhat different from that by the Steel Corporation itself, as given in Table 30, and, furthermore, that the statistics in Table 50 do not include certain semifinished products, such as billets, slabs, etc., which were included in Table 30. However, since the Iron and Steel Association statistics are presumably compiled on a uniform basis from year to year, they afford a satisfactory basis for the present discussion.

TABLE 50.—ANNUAL PRODUCTION OF ORE, COKE, AND IRON AND STEEL PRODUCTS BY UNITED STATES STEEL CORPORATION AND BY INDEPENDENT CONCERNS, 1901-1910.[1]

[From annual statistical reports of the American Iron and Steel Association.]

Product.	1901.				1902.			
	U. S. Steel Corporation.	Independent companies.	Total, all companies.	U. S. Steel Corp.'s percentage of total.	U. S. Steel Corporation.	Independent companies.	Total, all companies.	U. S. Steel Corp.'s percentage of total.
Iron ore:	*Gr. tons.*	*Gr. tons.*	*Gr. tons.*		*Gr. tons.*	*Gr. tons.*	*Gr. tons.*	
Production, all districts	12,692,213	16,195,266	28,887,479	43.9	16,063,179	19,490,956	35,554,135	45.1
Shipments from Lake region	12,692,213	7,897,024	20,589,237	61.6	16,659,470	10,911,651	27,571,121	60.4
Coke[2]	....	....	....	....	9,521,567	15,880,163	25,401,730	37.4
Pig iron, excluding spiegel, etc	6,613,503	8,973,390	15,586,893	42.4	7,802,812	9,805,514	17,608,326	44.3
Spiegeleisen, ferromanganese, etc	190,485	100,976	291,461	65.4	172,718	40,263	212,981	81.0
Ingots and castings:								
Bessemer	6,113,588	2,599,714	8,713,302	70.2	6,759,210	2,379,153	9,138,363	73.9
Open hearth	2,746,996	1,909,313	4,656,309	59.0	2,984,708	2,703,021	5,687,729	52.4
Total	8,860,584	4,509,027	13,369,611	66.3	9,743,918	5,082,174	14,826,092	65.7
Rolled products:								
Bessemer steel rails	1,719,076	1,151,740	2,870,816	59.9	1,920,786	1,014,606	2,935,392	65.4
Structural shapes	629,733	383,417	1,013,150	62.2	753,481	546,845	1,300,326	57.9
Plates and sheets[3]	1,456,897	797,528	2,254,425	64.6	1,583,865	1,081,544	2,665,409	59.4
Wire rods	1,059,859	306,075	1,365,934	77.6	1,126,826	447,467	1,574,293	71.5
Bars, skelp, nail plate, open-hearth and iron rails, and other finished rolled products	1,324,393	3,520,609	4,845,002	27.3	1,701,700	3,766,996	5,468,696	31.1
Total finished rolled products	6,189,958	6,159,369	12,349,327	50.1	7,086,658	6,857,458	13,944,116	50.8
Wire nails (kegs of 100 lbs.)	6,446,938	3,356,884	9,803,822	65.8	7,122,354	3,859,892	10,982,246	64.8
	1903.				1904.			
Iron ore:	*Gr. tons.*	*Gr. tons.*	*Gr. tons.*		*Gr. tons.*	*Gr. tons.*	*Gr. tons.*	
Production, all districts	15,363,355	19,655,953	35,019,308	43.8	10,503,087	17,141,243	27,644,330	37.9
Shipments from Lake region	14,293,083	9,996,795	24,289,878	58.8	11,746,409	10,076,430	21,822,839	53.8
Coke[2]	8,658,391	16,603,969	25,262,360	34.2	8,652,293	14,969,227	23,621,520	36.6
Pig iron, excluding spiegel, etc	7,123,053	10,693,538	17,816,591	39.9	7,213,933	9,062,708	16,276,641	44.3
Spiegeleisen, ferromanganese, etc	156,188	36,473	192,661	81.0	155,488	64,904	220,392	70.5

[1] These statistics for 1901 cover the business of the constituent concerns of the United States Steel Corporation for the entire calendar year and not merely for the nine months covered by the operations of that concern

[2] All figures for coke are given in net tons.

[3] Including black plates for tinning, but excluding nail plate.

TABLE 50.—ANNUAL PRODUCTION OF ORE, COKE, AND IRON AND STEEL PRODUCTS BY UNITED STATES STEEL CORPORATION AND BY INDEPENDENT CONCERNS, 1901-1910—Continued.

[From annual statistical reports of the American Iron and Steel Association.]

Product.	1903—Continued.				1904—Continued.			
	U.S. Steel Corporation.	Independent companies.	Total, all companies.	U. S. Steel Corp.'s percentage of total.	U. S. Steel Corporation.	Independent companies.	Total, all companies.	U. S. Steel Corp.'s percentage of total.
Ingots and castings:	*Gr. tons.*	*Gr. tons.*	*Gr. tons.*		*Gr. tons.*	*Gr. tons.*	*Gr. tons.*	
Bessemer	6,191,660	2,401,169	8,592,829	72.0	5,427,979	2,431,161	7,859,140	69.0
Open hearth	2,976,300	2,853,611	5,829,911	51.0	2,978,399	2,929,767	5,908,166	50.4
Total	9,167,960	5,254,780	14,422,740	63.5	8,406,378	5,360,928	13,767,306	61.0
Rolled products:								
Bessemer steel rails	1,934,315	1,012,441	2,946,756	65.6	1,223,884	914,073	2,137,957	57.2
Structural shapes	660,978	434,835	1,095,813	60.3	523,854	425,292	949,146	55.1
Plates and sheets [1]	1,557,223	1,042,442	2,599,665	59.9	1,406,397	1,015,001	2,421,398	58.0
Wire rods	1,100,290	403,165	1,503,455	73.1	1,212,012	487,016	1,699,028	71.3
Bars, skelp, nail plate, open-hearth and iron rails, and other finished rolled products	1,510,085	3,551,923	5,062,008	29.8	1,378,651	3,427,201	4,805,852	28.6
Total finished rolled products	6,762,891	6,444,806	13,207,697	51.2	5,744,798	6,268,583	12,013,381	47.8
Wire nails (kegs of 100 lbs.)	6,801,180	2,830,481	9,631,661	70.6	7,998,912	3,927,749	11,926,661	67.0
	1905.				1906.			
Iron ore:	*Gr. tons.*	*Gr. tons.*	*Gr. tons.*		*Gr. tons.*	*Gr. tons.*	*Gr. tons.*	
Production, all districts	18,486,556	24,039,577	42,526,133	43.4	20,645,148	27,104,580	47,749,728	43.2
Shipments from Lake region	19,251,872	15,101,584	34,353,456	56.0	20,885,774	17,637,665	38,523,439	54.2
Coke [2]	12,242,909	19,988,220	32,231,129	37.9	13,295,075	23,106,142	36,401,217	36.5
Pig iron, excluding spiegel, etc	9,951,891	12,746,513	22,698,404	43.8	11,061,794	13,939,755	25,001,549	44.2
Spiegeleisen, ferromanganese, etc	220,257	73,719	293,976	74.9	205,583	100,059	305,642	67.2
Ingots and castings:								
Bessemer	7,379,188	3,562,187	10,941,375	67.4	8,072,655	4,203,175	12,275,830	65.7
Open hearth	4,616,051	4,355,325	8,971,376	51.4	5,456,544	5,523,869	10,980,413	49.6
Total	11,995,239	7,917,512	19,912,751	60.2	13,529,199	9,727,044	23,256,243	58.1
Rolled products:								
Bessemer steel rails	1,713,610	1,478,737	3,192,347	53.6	1,995,868	1,795,591	3,791,459	52.6
Structural shapes	908,096	752,423	1,660,519	54.6	1,157,271	961,501	2,118,772	54.6
Plates and sheets [1]	2,028,429	1,503,801	3,532,230	57.4	2,354,790	1,827,366	4,182,156	56.3
Wire rods	1,265,707	542,981	1,808,688	69.9	1,342,391	529,223	1,871,614	71.7

[1] Including black plates for tinning, but excluding nail plate.

[2] All figures for coke are given in net tons.

Table 50.—ANNUAL PRODUCTION OF ORE, COKE, AND IRON AND STEEL PRODUCTS BY UNITED STATES STEEL CORPORATION AND BY INDEPENDENT CONCERNS, 1901-1910—Continued.

[From annual statistical reports of the American Iron and Steel Association.]

Product.	1905—Continued.				1906—Continued.			
	U. S. Steel Corporation.	Independent companies.	Total, all companies.	U. S. Steel Corp.'s percentage of total.	U. S. Steel Corporation.	Independent companies.	Total, all companies.	U. S. Steel Corp.'s percentage of total.
Rolled products—Contd.								
Bars, skelp, nail plate, open-hearth and iron rails, and other finished rolled products.	*Gr. tons.* 2,063,113	*Gr. tons.* 4,583,118	*Gr. tons.* 6,646,231	31.0	*Gr. tons.* 2,582,626	*Gr. tons.* 5,041,841	*Gr. tons.* 7,624,467	33.8
Total finished rolled products..	7,978,955	8,861,060	16,840,015	47.3	9,432,946	10,155,522	19,588,468	48.1
Wire nails (kegs of 100 lbs.).................	7,175,418	3,679,474	10,854,892	66.1	7,524,114	3,962,533	11,486,647	65.5
	1907.				1908.			
Iron ore:	*Gr. tons.*	*Gr. tons.*	*Gr. tons.*		*Gr. tons.*	*Gr. tons.*	*Gr. tons.*	
Production, all districts	22,403,801	29,316,818	51,720,619	43.3	16,662,715	19,320,621	35,983,336	46.3
Shipments from Lake region................	23,148,467	19,096,603	42,245,070	54.7	14,579,613	11,435,374	26,014,987	56.0
Coke [1]................	12,373,938	28,405,626	40,779,564	30.3	8,169,931	17,863,587	26,033,518	31.3
Pig iron, excluding spiegel, etc............	10,633,496	14,808,517	25,442,013	41.7	6,819,064	8,964,936	15,784,000	43.2
Spiegeleisen, ferromanganese, etc............	186,472	152,876	339,348	54.9	115,344	36,674	152,018	75.8
Ingots and castings:								
Bessemer..............	7,556,460	4,111,089	11,667,549	64.7	4,055,275	2,061,480	6,116,755	66.2
Open hearth...........	5,543,088	6,006,648	11,549,736	47.9	3,783,438	4,053,291	7,836,729	48.2
Total..............	13,099,548	10,117,737	23,217,285	56.4	7,838,713	6,114,771	13,953,484	56.1
Rolled products:								
Bessemer steel rails....	1,744,578	1,635,447	3,380,025	51.6	790,630	558,523	1,349,153	58.6
Open-hearth steel rails.	....	....	....	....	265,067	306,724	571,791	46.3
Structural shapes......	1,066,727	873,625	1,940,352	54.9	510,343	572,838	1,083,181	47.1
Plates and sheets [2].....	2,372,498	1,876,334	4,248,832	55.8	1,377,089	1,272,604	2,649,693	51.9
Wire rods..............	1,443,191	574,392	2,017,583	71.5	1,234,220	582,729	1,816,949	67.9
Bars, skelp, nail plate, open-hearth and iron rails, and other finished rolled products.	2,814,042	5,463,988	8,278,030	33.9	1,394,179	2,963,247	4,357,426	31.9
Total finished rolled products.	9,441,036	10,423,786	19,864,822	47.5	5,571,528	6,256,665	11,828,193	47.1
Wire nails (kegs of 100 lbs.).................	7,794,546	3,936,498	11,731,044	66.4	6,529,718	4,133,254	10,662,972	61.2
Tin plates and terne plates..................	....	....	....	....	386,718	150,369	537,087	72.0

[1] All figures for coke are given in net tons.

[2] Including black plates for tinning, but excluding nail plate.

TABLE 50.—ANNUAL PRODUCTION OF ORE, COKE, AND IRON AND STEEL PRODUCTS BY UNITED STATES STEEL CORPORATION AND BY INDEPENDENT CONCERNS, 1901-1910—Continued.

[From annual statistical reports of the American Iron and Steel Association.]

Product.	1909.				1910.			
	U. S. Steel Corporation.	Independent companies.	Total, all companies.	U. S. Steel Corp.'s percentage of total.	U. S. Steel Corporation.	Independent companies.	Total, all companies.	U. S. Steel Corp.'s percentage of total.
Iron ore:	*Gr. tons.*	*Gr. tons.*	*Gr. tons.*		*Gr. tons.*	*Gr. tons.*	*Gr. tons.*	
Production, all districts	23,431,047	27,863,224	51,294,271	45.7	25,245,816	....	....	....
Shipments from Lake region	21,876,246	20,710,623	42,586,869	51.4	22,185,972	21,256,425	43,442,397	51.0
Coke[1]	13,590,112	25,724,953	39,315,065	34.6	13,649,578	28,059,232	41,708,810	32.7
Pig iron, excluding spiegel, etc.	11,455,200	14,115,231	25,570,431	44.8	11,657,762	15,421,374	27,079,136	43.0
Spiegeleisen, ferromanganese, etc.	163,150	61,890	225,040	72.5	173,636	50,795	224,431	77.4
Ingots and castings:[2]								
Bessemer	5,846,300	3,484,483	9,330,783	62.7	5,796,223	3,616,549	9,412,772	61.6
Open hearth	7,508,889	6,985,047	14,493,936	51.8	8,383,146	8,121,363	16,504,509	50.8
Total	13,355,189	10,469,530	23,824,719	56.0	14,179,369	11,737,912	25,917,281	54.7
Rolled products:								
Bessemer steel rails	1,012,512	754,659	1,767,171	57.3	1,134,381	750,061	1,884,442	60.2
Open-hearth steel rails	722,605	534,069	1,256,674	57.5	1,004,565	746,794	1,751,359	57.4
Structural shapes	1,071,018	1,204,544	2,275,562	47.1	1,163,300	1,103,590	2,266,890	51.3
Plates and sheets[3]	2,108,576	2,125,770	4,234,346	49.8	2,380,106	2,575,378	4,955,484	48.0
Wire rods	1,626,936	708,749	2,335,685	69.7	1,508,294	733,536	2,241,830	67.3
Bars, skelp, nail plate, iron rails, and other finished rolled products	3,063,659	4,711,593	7,775,252	39.4	3,203,279	5,317,995	8,521,274	37.6
Total finished rolled products	9,605,306	10,039,384	19,644,690	48.9	10,393,925	11,227,354	21,621,279	48.1
Wire nails (kegs of 100 lbs.)	8,442,500	5,473,553	13,916,053	60.7	7,041,692	5,663,210	12,704,902	55.4
Tin plates and terne plates	378,767	233,192	611,959	61.9	440,694	282,076	722,770	61.0

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[1] All figures for coke are given in net tons.

[2] The division of the total production between Bessemer and open hearth is not given by the American Iron and Steel Association in these years. The figures for the Steel Corporation alone appear in Table 30 (p. 270).

[3] Including black plates for tinning, but excluding nail plate.

Section 2. Percentages of country's production of principal iron and steel products controlled by Steel Corporation.

The relative position of the Steel Corporation from a manufacturing standpoint may be better seen from the following table—based upon Table 50—which gives simply the Corporation's percentages of the country's production of these leading iron and steel products during this period. It may be noted that the percentages for pig iron and spiegeleisen, ferromanganese, etc., in addition to being stated separately, are in this table combined.

TABLE 51.—PROPORTION OF TOTAL UNITED STATES PRODUCTION OF IRON ORE, COKE, AND VARIOUS IRON AND STEEL PRODUCTS CONTROLLED BY THE UNITED STATES STEEL CORPORATION, YEARLY, 1901–1910.

[From annual statistical reports of the American Iron and Steel Association.]

Product.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Iron ore:	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*
Production, all districts	43.9	45.1	43.8	37.9	43.4	43.2	43.3	46.3	45.7	(3)
Shipments from Lake region	61.6	60.4	58.8	53.8	56.0	54.2	54.7	56.0	51.4	51.0
Coke	(3)	37.4	34.2	36.6	37.9	36.5	30.3	31.3	34.6	32.7
Pig iron	42.4	44.3	39.9	44.3	43.8	44.2	41.7	43.2	44.8	43.0
Spiegeleisen, ferromanganese, etc	65.4	81.0	81.0	70.5	74.9	67.2	54.9	75.8	72.5	77.4
Total pig iron, spiegel, ferro, etc	42.9	44.7	40.4	44.6	44.2	44.5	41.9	43.5	45.0	43.3
Ingots and castings:[1]										
Bessemer	70.2	73.9	72.0	69.0	67.4	65.7	64.7	66.2	62.7	61.6
Open hearth	59.0	52.4	51.0	50.4	51.4	49.6	47.9	48.2	51.8	50.8
Total	66.3	65.7	63.5	61.0	60.2	58.1	56.4	56.1	56.0	54.7
Rolled products:										
Bessemer steel rails	59.9	65.4	65.6	57.2	53.6	52.6	51.6	58.6	57.3	60.2
Open-hearth steel rails	(4)	(4)	(4)	(4)	(4)	(4)	(4)	46.3	57.5	57.4
Structural shapes	62.2	57.9	60.3	55.1	54.6	54.6	54.9	47.1	47.1	51.3
Plates and sheets[2]	64.6	59.4	59.9	58.0	57.4	56.3	55.8	51.9	49.8	48.0
Wire rods	77.6	71.5	73.1	71.3	69.9	71.7	71.5	67.9	69.7	67.3
Bars, skelp, nail plate, iron rails, and other finished rolled products	27.3	31.1	29.8	28.6	31.0	33.8	33.9	31.9	39.4	37.6
Total finished rolled products	50.1	50.8	51.2	47.8	47.3	48.1	47.5	47.1	48.9	48.1
Wire nails (kegs of 100 lbs.)	65.8	64.8	70.6	67.0	66.1	65.5	66.4	61.2	60.7	55.4
Tin plates and terne plates	(3)	(3)	(3)	(3)	(3)	(3)	(3)	72.0	61.9	61.0

[1] See note 2, page 363.

[2] Including black plates for tinning, but excluding nail plate.

[3] Data not available.

[4] None produced by Corporation.

The Steel Corporation itself prepared a comparative statement of similar percentages with, however, a somewhat different classification. The Corporation, it should be noted, relied largely upon the reports of the American Iron and Steel Association. Its figures are given in Table 52. They are, in most instances, substantially the same for the same products as those compiled by the American Iron and Steel Association except that in 1907 the Steel Corporation's figures include the production of the Tennessee Coal, Iron and Railroad Company, while those of the American Iron and Steel Association do not. The Corporation's figures for ingots and castings, moreover, include certain special steels, the tonnage of which is small, while those of the Association, as here given, do not.[1]

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[1] In 1909 and 1910 the Association included special steels in its ingot figures, but they have been excluded by the Bureau so as to keep the Association's statistics on a uniform basis.

TABLE 52.—STEEL CORPORATION'S PERCENTAGES OF TOTAL PRODUCTION IN THE UNITED STATES OF PIG IRON AND VARIOUS STEEL PRODUCTS, AS COMPUTED BY THE CORPORATION, 1901–1910.

[These data are based upon actual tonnage produced, except as otherwise noted, as furnished by statistics published by the American Iron and Steel Association supplemented by investigation made by the United States Steel Corporation.[1]]

Year.	Pig iron, spiegel, and ferro.		Steel ingots and castings.		Rails.		Structural shapes.		Plates and sheets of all kinds.[2]		Black plate produced in tin mills.	
	U. S. Steel.	Other.	U. S. Steel.	Other.	U. S. Steel.	Other.	U. S. Steel.	Other.	U. S. Steel.	Other.	U. S. Steel.	Other.
1901	43.2	56.8	65.7	34.3	59.8	40.2	62.2	37.8	64.6	35.4	79.8	20.2
1902	44.8	55.2	65.2	34.8	67.6	32.4	57.9	42.1	59.4	40.6	70.7	29.3
1903	40.4	59.6	63.1	36.9	64.4	35.6	60.3	39.7	59.9	40.1	77.6	22.4
1904	44.7	55.3	60.7	39.3	54.3	45.7	55.1	44.9	58.0	42.0	71.5	28.5
1905	44.2	55.8	60.0	40.0	51.2	48.8	54.6	45.4	57.4	42.6	67.9	32.1
1906	44.5	55.5	57.8	42.2	50.2	49.8	54.6	45.4	56.3	43.7	70.4	29.6
1907[3]	44.3	55.7	57.1	42.9	52.2	47.8	54.9	45.1	55.8	44.2	69.1	30.9
1908[3]	43.5	56.5	55.9	44.1	55.0	45.0	47.1	52.9	51.9	48.1	67.6	32.4
1909[3]	45.0	55.0	55.8	44.2	57.4	42.6	47.0	53.0	49.7	50.3	60.0	40.0
1910[3]	43.4	56.6	54.3	45.7	58.9	41.1	(4)	(4)	(4)	(4)	52.9	47.1

Year.	Coated tin-mill products.		Black and coated sheets produced in sheet mills.		Wire rods.[5]		Wire nails.		Wrought pipe and tubes.[6]		Seamless tubes.[6]	
	U. S. Steel.	Other.	U. S. Steel.	Other.	U. S. Steel.	Other.	U. S. Steel.	Other.	U. S. Steel.	Other.	U. S. Steel.	Other.
1901	73.1	26.9	67.3	32.7	77.7	22.3	68.1	31.9	57.2	42.8	82.8	17.2
1902	71.4	28.6	58.1	41.9	71.6	28.4	64.8	35.2	53.0	47.0	72.2	27.8
1903	76.4	23.6	51.4	48.6	73.1	26.9	71.6	28.4	54.6	45.4	64.1	35.9
1904	71.4	28.6	52.8	47.2	71.5	28.5	68.2	31.8	51.1	48.9	64.1	35.9
1905	71.3	28.7	58.4	41.6	69.9	30.1	67.4	32.6	54.0	46.0	60.8	39.2
1906	73.5	26.5	52.7	47.3	71.7	28.3	65.2	34.8	52.4	47.6	65.5	34.5
1907[3]	72.6	27.4	50.6	49.4	71.5	28.5	69.4	30.6	53.3	46.7	66.4	33.6
1908[3]	71.1	28.9	41.3	58.7	67.9	32.1	67.6	32.4	47.4	52.6	66.3	33.7
1909[3]	61.9	38.1	40.7	59.3	69.7	30.3	60.9	39.1	43.7	56.3	61.0	39.0
1910[3]	61.1	38.9	38.9	61.1	67.3	32.7	55.5	44.5	38.2	61.8	55.3	44.7

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[1] The relative percentages shown in the above statement are based upon gross production. However, as related to the domestic consumption within the United States of the several products, the above percentages given for United States Steel overstate its relative position. This is because approximately 10 per cent of the Steel Corporation's output is shipped in the export trade, while all other manufacturers in the United States as a whole conduct a comparatively small export business. Making allowance for this export tonnage, it is estimated by the Corporation that its tonnage is equal in total to somewhat less than 50 per cent of the entire steel produced in the United States which is sold for domestic uses.

[2] Includes sheets for tinning, galvanizing, and other coatings.

[3] Tennessee Coal, Iron and Railroad Company included with Steel Corporation in these years.

[4] Data not available.

[5] The percentages given for wire rods also overstate the relative position of the Corporation as to the wire industry as represented by wire for consumption, because of the fact that the Corporation has sold annually from 8 to 10 per cent of its output of wire rods.

[6] These percentages are based on capacity, not production, and moreover, the capacity of "other" companies is partly estimated. The comparison does not include cast-iron pipe, which the Steel Corporation does not make at all.

For the purposes of the present discussion it will be found convenient to use the classification given in Table 51, referring from time to time to the percentages computed by the Steel Corporation. From an examination of Table 51 it will be seen that the Corporation has maintained its relative position in the industry much better in the case of iron ore and pig iron than in the case of crude steel and finished steel products. The changes in its relative position may best be seen by a discussion of the important products separately.

IRON ORE.—With respect to the production of iron ore, it will be seen that the Corporation has well maintained the position which it held in 1901. Indeed, the figures for recent years show that its percentage of the total production of the country is somewhat greater than it was in 1901. Thus, in 1908 the Corporation produced 46.3 per cent of the total ore output of the country, and in 1909, 45.7 per cent, as compared with 43.9 per cent in 1901. (The 1910 figures have not yet been published by the Association. The Corporation's proportion in that year, however, based upon Geological Survey figures, was 44.4 per cent.)

A striking feature of these percentages for ore is their comparative uniformity. Except for 1904, the Corporation's percentage of the total production never fell as low as 43 per cent, and in only one year exceeded 46 per cent.

These percentages of production are based upon the total output of the country. Taking ore shipments from the Lake region (the production of mines in that region alone not being shown by the American Iron and Steel Association's reports), the Steel Corporation had a distinctly larger share of the business than it had of the total production of the country. The average for the period 1901–1908 was in the neighborhood of 56 per cent, as against an average of, roughly, 44 per cent of the total production. However, while the Steel Corporation's share of the country's production has been well maintained, with, in fact, an increasing tendency (chiefly on account of the acquisition of the Tennessee Coal, Iron and Railroad Company), its share of the shipments from the Lake Superior region has declined rather sharply, especially since 1908, its percentage in 1910 being only 51 as against 61.6 in 1901.

Generally speaking it may be said that the Steel Corporation has since its organization controlled approximately 45 per cent of the production of the country's ore and substantially 55 per cent of the shipments of ore from the Lake Superior region alone. Since the bulk of the ore used for steel-making purposes comes from the Lake region, the latter percentage is the better index to the real position of the Steel Corporation as an ore producer. The actual production of ore by the Steel Corporation in 1910, as will be seen from Table 50, was in excess of 25,000,000 tons, of which approximately

23,000,000 tons was from its Lake Superior mines. Almost 18,000,000 tons of the Corporation's total for the year was from the Mesabi Range alone.

COKE.—Table 51 shows that the Steel Corporation not only occupies a much less important position in the coke industry than in the ore industry, but also that its percentage of the country's coke production has been gradually reduced since its organization. Thus, from 37.4 per cent in 1902 (figures for 1901 not being available), the Corporation's share of the coke production of the country had by 1910 fallen below 33 per cent; in 1907 and 1908 it was somewhat lower.

These percentages for coke are somewhat misleading, for the reason that a considerable amount of the total production under discussion is for other than iron and steel making purposes, and the percentages, therefore, tend to understate the importance of the Steel Corporation in this branch of the coke business.[1] If statistics of production of coke for iron and steel making purposes alone were available, the Corporation's percentages would be distinctly higher.

PIG IRON.—The striking feature of the Corporation's percentages of pig-iron production is their close similarity to those for ore, not only in the figures themselves but in their comparatively moderate fluctuations during the period covered. Thus, the extreme range in these percentages (including ferromanganese, etc.) in Table 51 was from 40.4 per cent to 45 per cent, and excluding the year 1903, from only 41.9 per cent to 45 per cent. When it is recalled that during this period the large pig-iron capacity of the Union-Sharon and Clairton steel companies and of the Tennessee Coal, Iron and Railroad Company was acquired, not to mention still larger additions by new furnaces built (see Table 29, p. 269), the failure of the Corporation to substantially increase its percentage is a striking indication of the rapid growth of independent production.

The Steel Corporation's own percentages of its production of pig iron, as given in Table 52 (these, as already stated, being based upon the total figures of production as compiled by the American Iron and Steel Association), are substantially identical with those compiled by the Association itself, except for 1901 and 1907.

The discrepancy between the two sets of figures in 1901 was apparently due to the fact that certain revisions of the figures of that year were subsequently made by the Steel Corporation which are not taken account of in the figures of the American Iron and Steel Association, while the difference in 1907 is due, as already stated, to the fact that the Steel Corporation's percentages include the production of the Tennessee Coal, Iron and Railroad Company, while those of the American Iron and Steel Association do not. The percentages of the Tennessee Coal, Iron and Railroad Company's pig iron production to the total of the country from 1907 to 1910, inclusive, were as follows:

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[1] It should be noted, however, that the production of coke, as given in Table 50, does not include coke produced as a by product of illuminating gas, commercially known as "gas-house coke."

1907	2.3
1908	3.2
1909	2.2
1910	2.8

It will be seen, therefore, that had it not been for the absorption of the Tennessee concern the Steel Corporation would have suffered a perceptible decline in its position as a producer of pig iron in the past few years.

During the ten-year period there was, of course, a very great increase in the production of pig iron. The total increase and the relative increase by the Steel Corporation and by independent companies are given in the following summary:

	1901.	1910.	Increase.	
	Tons.	*Tons.*	*Tons.*	*Per cent.*
By United States Steel Corporation interests	6,855,731	11,831,398	4,975,667	72.6
By independent companies	9,022,623	15,467,147	6,444,524	71.4
Total for United States	15,878,354	27,298,545	11,420,191	71.9

As already pointed out, the percentages of the Corporation's production above given do not give an adequate idea of its importance in the pig-iron branch of the steel industry, for the reason that a considerable part of the country's pig-iron output is used for the manufacture of foundry iron and for other purposes which do not bring it extensively into the field of the United States Steel Corporation, which is, of course, preeminently a steel-making concern.

From what has been said, therefore, it will be seen that the Steel Corporation's position in the iron-ore industry and in the production of the first crude material of the steel industry (pig iron) has been fairly well maintained at the percentages recorded at the time the Corporation was formed in 1901. The Corporation's percentage of coke, on the other hand, has fallen off somewhat, but allowing for the fact, above noted, that the percentages are based on a total which includes a considerable amount of coke not used in the steel industry, this decline probably would not have been especially marked. Therefore, in what may be called the "raw material" branches of the steel industry, the Steel Corporation practically has not lost much ground since its organization, but, on the contrary, has in the case of ore production strengthened its position, chiefly as a result of the purchase of the Tennessee Coal, Iron and Railroad Company. With respect to shipments of Lake ore, however, the Corporation has not held its own.

Ingots and castings.—The percentages of these crude-steel products probably afford the best single index of the Steel Corporation's position in the steel manufacturing industry. It will be seen from Table 51 that they disclose a decided recession in the relative standing of the Corporation. Thus, whereas in 1901 and 1902 the Corporation produced substantially 66 per cent of the country's crude steel, for the past few years its average has been only a little over 56 per cent, and in 1910 less than 55 per cent. This decline in the Steel Corporation's position has taken place despite the fact, brought out in Table 29, on page 269, that the crude-steel capacity of the Corporation has been increased from approximately 9,425,000 tons to over 18,000,000 tons, or by nearly 100 per cent, while its actual production increased from 8,860,000 tons in 1901 to over 14,170,000 tons in 1910. In other words, notwithstanding such important acquisitions as the Union-Sharon and Clairton steel companies, and the Tennessee Coal, Iron and Railroad Company, and despite the erection of its enormous Gary plant and other very important additions to its crude-steel works, the Corporation has failed by a considerable margin to hold its original position in this branch of the industry. This means, of course, that there has been a very rapid growth in the operations of its competitors. Moreover, these competitors are at the present time extending their operations.

The relatively much greater increase in the production of ingots and castings by independent manufacturers than by the Steel Corporation is well brought out by the following summary, comparing the production of the two groups of interests in 1901 and 1910:

	1901.	1910.	Increase.	
	Tons.	*Tons.*	*Tons.*	*Per cent.*
By United States Steel Corporation interests	8,854,820	14,179,369	5,324,549	60
By all other manufacturers	4,618,775	11,737,912	7,119,137	154
Total for United States	13,473,595	25,917,281	12,443,686	92

The Steel Corporation's percentages of the country's total production of steel ingots and castings, as computed by itself (see Table 52), are substantially identical with those compiled by the American Iron and Steel Association.

The principal reason for the small differences that do exist appears to be that the statistics of the American Iron and Steel Association include in the figures for the Steel Corporation certain special steels, but do not include such special steels in the grand total for the country. The percentages as figured by the Steel Corporation, on the other hand, include all steel of every description in both cases. In 1907, moreover, the Steel Corporation's percentages include returns for the Tennessee Coal, Iron and Railroad Company, whereas those of the American Iron and Steel Association do not.

It is worth noting that both sets of percentages show a decrease in the Corporation's share of the production of ingots and castings in every year since the company was organized. Furthermore, both sets show that the Steel Corporation's percentage in 1910 was less than 55 per cent, as compared with approximately 66 per cent in 1901.

Another striking feature of these statistics is that although the large crude-steel production of the Corporation's immense Gary plant is exclusively from open-hearth furnaces, the addition of this plant had only an insignificant effect upon the Corporation's share of even the open-hearth steel production of the country. This is due to the fact, of course, that the increase in steel capacity by its competitors has also been chiefly through open-hearth manufacture. As may be seen from Table 50, the Steel Corporation's production of open-hearth crude steel in 1901 was less than 2,750,000 tons, whereas in 1910 it exceeded 8,380,000 tons. Its production of Bessemer steel ingots and castings, on the other hand, after rising from, roughly, 6,114,000 tons in 1901 to over 8,000,000 in 1906, had declined by 1910 to less than 5,800,000 tons.[1]

This relatively rapid development of the open-hearth steel business of the Corporation has a direct bearing upon its pig-iron production. It will be noted that the Corporation's production of crude steel has in every year considerably exceeded its production of pig iron. The excess, yearly, for the period covered has been as follows:

TABLE 53.—COMPARISON OF PIG-IRON PRODUCTION OF STEEL CORPORATION WITH ITS CRUDE-STEEL PRODUCTION, 1901-1910.

Year.	Production of pig-iron, spiegel, etc.	Production of ingots and castings.	Excess of crude steel over pig-iron production.	Year.	Production of pig-iron, spiegel, etc.	Production of ingots and castings.	Excess of crude steel over pig-iron production.
	Tons.	*Tons.*	*Tons.*		*Tons.*	*Tons.*	*Tons.*
1901	6,855,731	8,854,820	1,999,089	1906	11,267,377	13,511,149	2,243,772
1902	7,975,530	9,743,918	1,768,388	1907	10,819,968	13,099,548	2,279,580
1903	7,279,241	9,167,960	1,888,719	1908	6,934,408	7,838,713	904,305
1904	7,369,421	8,406,378	1,036,957	1909	11,618,350	13,355,189	1,736,839
1905	10,172,148	11,995,239	1,823,091	1910	11,831,398	14,179,369	2,347,971

In the first few years after its organization the Steel Corporation purchased a considerable amount of pig iron from "merchant" furnaces, its pig-iron capacity not being equal to the demands of its steel works. Such purchases account in part for the excess of the production of ingots and castings over the production of pig iron in these earlier years. A more important factor, however, was the use of scrap metal in open-hearth steel plants.

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[1] These figures taken from the 1910 annual report of the Corporation.

Through its acquisition of the Union-Sharon and Clairton steel companies, in 1902 and 1904, respectively, the Steel Corporation made a considerable addition to its pig-iron capacity, but the steel-ingot capacity of these concerns was even greater than their pig-iron capacity, so that relatively the pig-iron production of the Corporation, which had been somewhat deficient as compared with its requirements for the manufacture of steel products, was not increased. Through the purchase of the Tennessee Coal, Iron and Railroad Company, however (see p. 269), the Corporation added 1,000,000 tons to its pig-iron capacity, and only half that amount to its steel-ingot capacity.

Notwithstanding this important acquisition, however, and notwithstanding the erection of many new modern furnaces of large capacity, it will be seen that the excess of the crude-steel output of the Corporation over its pig-iron production has increased in recent years. This does not mean that the Corporation has relied to an increasing extent upon outside furnaces for its supply of pig iron. In fact, the reverse is true. This increase in the excess of steel capacity over pig-iron output is largely explained by the more rapid development of the open-hearth process just described. In the manufacture of open-hearth steel a very large proportion of scrap iron and steel is utilized, and also some ore, whereas the Bessemer process is almost entirely dependent upon pig iron from blast furnaces. It should be clearly understood, therefore, that the excess of steel over pig-iron production shown by the above figures does not mean that the Steel Corporation has purchased any such quantity of pig iron in the open market to meet its steel manufacturing requirements, but instead that the Corporation has been able to use an increasing amount of scrap iron and steel, thus reducing, relatively speaking, its pig-iron requirements. A part of the excess in any given year, moreover, may have been due to consumption of inventory stocks of iron carried over from previous years, but this, on the whole, is a minor consideration.

ROLLED PRODUCTS.—Taking the various rolled products as a group, it will be noted that the percentages (see Table 51) show that the Steel Corporation's position has been fairly well maintained, its share in 1910 being 48.1 per cent as compared with about 50 per cent in 1901. Individual products, however, show some striking variations. Thus it will be seen that the Corporation's production of Bessemer steel rails, after falling from 65.6 per cent in 1903 to 51.6 per cent in 1907, rose in 1908 to 58.6 per cent; the percentage for 1910 was 60.2. The early decrease in the Corporation's percentage for this product was chiefly due to the opening of the important rail mill of the Lackawanna Steel Company at its new Buffalo plant (see p. 96), while the recovery in 1908 is chiefly attributable to the acquisition of the Tennessee Coal, Iron and Railroad Company by the Steel Corporation, which, it will be recalled, occurred at the close of 1907. A more important consideration in connection with steel rails, however, was the opening of a rail mill by the Steel Corporation in 1909 at its Gary, Ind., plant, which used open-hearth steel. In order to get a correct idea of the Steel Corporation's position in the steel rail business, therefore, it is necessary to combine the statistics for Bessemer and open-hearth rails (not the percentages as given in this table). Thus in 1910 the Steel Corporation's actual production of Bessemer and open-hearth steel rails was in excess of 2,110,000 tons. This, however, was only 58.8 per cent of the country's total production of both classes, so that notwithstanding the great increase in the output of the Steel Corporation that concern did not materially strengthen its position in the steel-rail business as a whole.

In the case of several of the finished rolled products the Corporation has suffered serious loss of ground. In structural shapes and in plates and sheets the decrease in its percentage has been very important. Thus its percentage of the production of structural shapes fell from 62.2 per cent in 1901 to 51.3 per cent in 1910,[1] while its percentage of the output of plates and sheets fell from 64.6 per cent to 48 per cent during the same interval. In wire rods the Corporation's percentage has fallen from 77.6 to 67.3 per cent. The movement in wire nails has been similar, although the percentages themselves are throughout somewhat smaller than those for wire rods. In this connection it is worth pointing out that in 1910 the Jones & Laughlin Steel Company and the Cambria Steel Company had important wire-rod and wire plants under construction. Moreover, it has recently been reported that the Lackawanna Steel Company was likely to enter this branch of the steel business.

Statistics for tin plate production for the earlier years are not given by the American Iron and Steel Association, but the percentages compiled by the Steel Corporation itself (see Table 52) show that in 1901 it produced over 73 per cent of the total production of the country. The percentage for 1910 was about 61, thus indicating a marked recession in the Corporation's position with respect to this product, or, in other words, a decided relative increase in outside production.

SUMMARY.—It will be seen, therefore, that two important facts are brought out by these various percentages—first, that the Steel

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[1] It may be noted that the Corporation's computation (see Table 52) gives its percentage of structural shapes for 1909 at 47 per cent. The increase indicated by the American Iron and Steel Association's figures in 1910 may have been due to the operation of the Gary plant. The American Iron and Steel Association's figure for 1909, it will be seen, is 47.1, or practically identical with that of the Corporation.

Corporation has well maintained its position with respect to the cruder materials—ore, coke and pig iron—and in fact has in some instances increased its share of the country's total production; but, second, that in the case of crude steel and most leading steel products, with the exception of steel rails, the Corporation, notwithstanding the great additions to its plant capacity, both through new construction and through acquisition, has not kept pace with its competitors, but has suffered more or less pronounced retrogression. The result has been that whereas at its organization in 1901 the Corporation may be fairly said to have controlled about 60 per cent of the entire crude steel and finished steel business of the country, at the close of 1910 its percentage was not much over 50 per cent. These facts alone clearly show that the Steel Corporation not only does not have a monopoly of the manufacturing branch of the steel industry as a whole, but furthermore that any monopolistic control which it may have had in this respect at its organization has been materially weakened during the past ten years. In other words, these figures mean that the United States Steel Corporation, large as it is, has not prevented competition (at least, competition in production) in the steel industry as a whole up to this time. Even in those lines of production in which the Steel Corporation had a quasi-monopolistic position at the time of its formation, such as wire, tin plate, and certain kinds of tubes, it has lost considerable ground in the last few years.

While, therefore, these statistics clearly show the existence of increasing independent production, it should be clearly understood that competition has not been particularly evident with respect to prices, where it has been materially modified by the existence of a price policy described as "cooperation." This will be discussed in a later part of the report.

Section 3. Position of Steel Corporation from standpoint of capacity and location of its plants.

The foregoing discussion has been based upon statistics of actual production. From the standpoint of capacity the Steel Corporation probably is in a somewhat stronger position than these figures of production alone would indicate.

During periods of depression the proportion of the Corporation's output to the total has generally been smaller than its proportion of capacity, owing to its policy of trying to maintain prices, but it is probable that if a period of violent competition occurred the Steel Corporation could easily increase its proportions of the total production and even eliminate permanently some of its weaker rivals.

In the distribution of its plants the Steel Corporation has, of course, a distinct advantage over any individual competitor. Not only has it the largest and most important plants in the Pittsburg and Valley districts, but it is by far the largest producer in the Chicago district, which includes its great Gary plant, while in the South, as already pointed out, it has become the leading steel interest through the acquisition of the Tennessee Coal, Iron and Railroad Company. In practically every important iron and steel district east of the Mississippi River, therefore, with the single exception of the Atlantic seaboard, the Steel Corporation is the leading factor.[1] It is worth noting in this connection that the Steel Corporation has within a comparatively recent date acquired some iron-ore property in Cuba. Whether this foreshadows the erection by the Corporation of steel works on the Atlantic coast can only be surmised.

This distribution of the Steel Corporation's plants obviously gives it a very important advantage with respect to transportation costs, both for raw materials and for finished products, while there naturally are further advantages arising from proximity to consuming markets. These advantages may easily be exaggerated, but it can not be doubted that the location of the Steel Corporation's plants at strategic points over so large an area must carry with it advantages of no small significance.

Section 4. Position of the Steel Corporation from the standpoint of transportation.

With respect to railroad transportation the Steel Corporation practically has the field to itself, so far as steel makers are concerned, no one of its competitors having railroad properties of sufficient consequence to call for special mention. The railroad properties of the Steel Corporation, on the other hand, are of great importance. Indeed the profits derived by the Steel Corporation from its transportation properties, these profits coming chiefly from its railroad lines, represent a very substantial fraction of the entire net earnings. It will be remembered that the Steel Corporation has the two most important ore roads in the Lake Superior region, the Duluth and Iron Range and the Duluth, Missabe and Northern. The rates on ore are undoubtedly excessive, thus not only contributing large revenue to the Steel Corporation, but at the same time imposing a burden upon such of its competitors as are forced to ship their ore over these roads.

The earnings of these two railroads have been extraordinary. The great bulk of their freight traffic is in the transportation of ore. The cost of ore transportation (not the freight rates) from the Minnesota ranges to Lake Superior has greatly declined in recent years, and the ratio of operating expenses to gross earnings is extremely low for both roads. That for the Duluth, Missabe and Northern, in 1910, was below 30 per cent, as against an average for all railroads in the country of 66 per cent, while that for the Duluth and Iron Range, in 1910, was only 36.5 per cent. Freight rates, on the other hand, have been maintained at the same point at which they were established prior to the formation of the Steel Corporation. They average about 1 cent per ton-mile, which is undoubtedly excessive. As a result of these high freight rates and extraordinarily low operating expenses, these ore roads have been immensely profitable. The following table shows the dividends paid for a series of years.

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[1] In May, 1911, the Corporation purchased the Risdon Iron Works of San Francisco. This property, however, is used chiefly for warehousing purposes.

Table 54.—DIVIDENDS PAID BY STEEL CORPORATION'S ORE RAILROADS SINCE 1904.

Year ended June 30—	Duluth and Iron Range R. R.		Duluth, Missabe and Northern Ry.	
	Capital stock.	Rate.	Capital stock.	Rate.
		Per cent.		*Per cent.*
1904	$3,000,000	150	$2,512,500	150
1905	3,000,000	....	2,512,500	....
1906	3,000,000	105	4,112,500	[1] 102¾
1907	3,000,000	....	4,112,500	....
1908	3,000,000	120	4,112,500	110
1909	3,000,000	145	4,112,500	145
1910	3,000,000	100	4,112,500	240

[1] This was paid on $3,312,500 of stock, not on the full amount outstanding at the close of the year.

It should be pointed out that the amounts of capital stock issued by these companies upon which these rates of dividends are computed are comparatively small and undoubtedly considerably understate the investment in these roads in excess of the bonded indebtedness. As shown in Chapter III, there is good reason to believe that the capitalization of both these roads, in 1901, was fully covered by tangible property. The capital stock of the Duluth and Iron Range has not been changed since that date, and that of the Duluth, Missabe and Northern has been increased by only $1,600,000, whereas the investment in this property has been constantly increasing. Therefore, while these rates of dividends are by no means a fair indication of the rate upon the equity in the property represented by the capital stock, nevertheless these rates of dividends do mean that these two roads have been extraordinarily profitable.

Through the ownership of the Elgin, Joliet and Eastern Railway, and more particularly of the Bessemer and Lake Erie, the Steel Corporation has a further important advantage over its competitors with respect to transportation, as will be more clearly brought out in a subsequent part of this report. The minor railroad properties of the Corporation, also, particularly the Union Railroad of Pittsburg, the Chicago, Lake Shore and Eastern Railway, in the Chicago district, and the Connellsville and Monongahela Railway, in the Connellsville coal region, are important factors in its transportation system.

However, with respect to the transportation of finished products the Corporation, like its competitors, is chiefly dependent upon outside railroad systems, its own railroad lines covering such an insignificant fraction of the country as to be of comparatively minor importance in the transportation of finished steel products, although the possession of such railroad facilities even in this respect undoubtedly carries with it distinct advantages.

With respect to ore transportation on the Great Lakes, the Steel Corporation has a less commanding position. The Corporation transports only about two-thirds of its ore by Lake in its own boats, relying on outside vessel tonnage for the transportation of the remaining substantial fraction of its ore requirements.

Section 5. Position of the Steel Corporation with respect to ownership of coal and coke property.

At its organization the United States Steel Corporation controlled the great bulk of the choicest coking-coal lands in the Connellsville region, so that it had a very great advantage over its competitors in this respect. It has steadily added to its large holdings of coal and coke property. According to an affidavit of Thomas Lynch, president of the H. C. Frick Coke Company, in the Hodge suit, referred to in Chapter III, there were " less than 15,000 acres of unmined coal in the entire Connellsville basin outside of the holdings of the subsidiary companies of the United States Steel Corporation." Officials of the Steel Corporation have always placed great importance upon the value of their coal and coke property. Mr. Lynch in the affidavit just cited said:

> The value of the coal and coke properties above enumerated * * * is practically incalculable for the reason that in my opinion it would be impossible to replace these properties or to secure an adequate supply of coal and coke at anything like the present cost.

The above opinion, as previously noted, was probably influenced by the fact that the Steel Corporation was trying to justify its huge capitalization. Moreover, the subsequent development of new processes of making blast-furnace coke from various kinds of coal has somewhat modified the advantage of the Steel Corporation in the coke business, so that while the Corporation still maintains a decidedly advantageous position because of the exceptional coking quality of the Connellsville coal it can not be said to have a monopoly or even a monopolistic position in this branch of the steel industry.

As already stated on page 264, the Steel Corporation in 1911 made a very important acquisition of coking-coal properties from the Pittsburgh Coal Company, thereby still further strengthening its control of the most desirable coking-coal lands of the country. Therefore, while its position in the coking-coal business is by no means monopolistic, it should be kept in mind that the Corporation has secured control of a vast amount of coking-coal lands.

Section 6. Commanding position of Steel Corporation with respect to the ownership of iron ore.

From the preceding discussion it is apparent that the United States Steel Corporation does not have any monopoly of the production of iron and steel. Indeed, with respect to production alone, it hardly can be said to have, as a whole, a monopolistic position. Obviously a concern which, on the whole, produces over one-half of the country's steel output has a commanding position in the industry, overshadowing any individual competitor. On the other hand, the mere fact that over 50 per cent of the country's production of pig iron and nearly 50 per cent of the crude steel are manufactured by independents shows that there is substantial opportunity at the present time for independent production, even though competition has been regulated to a greater or less degree by understandings among producers.

In the railroad transportation of ore, it is true, the Steel Corporation has a position which in certain districts may fairly be designated as of a monopolistic character, and which undoubtedly contributes greatly to its strength in the industry. Nevertheless, it does not have a complete monopoly of ore transportation, even in the Lake region. In the old ranges of Michigan it has no railroads of its own, while in the Minnesota district there is one important outside road, the Eastern Railway of Minnesota, a branch of the Great Northern. Although the possession of its ore roads confers very great advantages upon the Corporation, it is obvious from the statistics presented that this has not prevented competition in the steel industry. Moreover, it has not prevented an increase in the production of the independents.

With respect to coking coal, the Steel Corporation has a decided advantage over all its competitors on account of its substantial monopoly of the famous Connellsville deposit, in western Pennsylvania. However, the fact that other coals can be commercially used for steel-making purposes in competition with the Connellsville product means, particularly in view of the almost unlimited supply of such grades of coal, that the Corporation in no sense has a monopoly of the coke branch of the steel industry.

So far as the Corporation has a monopolistic position in the steel industry, therefore, it rests chiefly on the one remaining branch, iron ore. As a matter of fact, the Steel Corporation does occupy a position in the iron-ore industry, which, while by no means constituting a monopoly, is clearly indicative of a monopolistic influence.

It is exceedingly difficult to make an accurate statement of the Corporation's position in the iron-ore industry from the standpoint of ownership. Obviously the full extent of any hidden natural resource can not be known. It is significant in this connection that the history of the industry shows that the great ore deposits of the country have almost invariably been greatly underestimated, while predictions that all the important deposits of the country have been discovered have almost yearly been disproved. An illustration of this is the recent discovery in the Baraboo district of southern Wisconsin of a tract of only comparatively small area for which the ore deposit is estimated at several hundred millions of tons, the ore, however, apparently being of rather low grade. Again, in the old range districts of Michigan extensive new deposits have been discovered in the past few years on territory which has long been under active development and extensively prospected. It would be absurd, therefore, to assume that the known deposits of ore in the country furnish a fixed denominator by which to measure the relative importance of the Steel Corporation.

An extremely important consideration in this connection is that iron ore of low grade occurs over enormous areas and in enormous quantities throughout the United States. A vast amount of such ore is of such low iron content, however, as to be out of consideration in any discussion of immediately available ore reserves. It is necessary, therefore, in discussing the proportion of the total ore reserves of the country controlled by the Corporation to confine comparisons to what may be termed commercially available ores at the present time. The Steel Corporation's holdings of such ores greatly exceed those of all other iron and steel interests combined.

It should be clearly understood that the ores of the Lake Superior region substantially form the basis of the steel production of the country. While the Steel Corporation has very extensive holdings of ore elsewhere, the great bulk of its ore holdings is in the Lake Superior district.

One of the best indications of the position of the Steel Corporation in the Lake region is found in a report of the Minnesota Tax Commission for 1908, which, after a very careful listing of the iron-ore mines of the State and estimate of their tonnage (evidently on a conservative basis), placed the grand total tonnage and that of the United States Steel Corporation in 1907 in round numbers as follows:

Grand total, all concerns in Minnesota……tons..	1,192,000,000
United States Steel Corporation (Oliver Iron Mining Company)……tons..	913,000,000
Per cent Steel Corporation (computed by Bureau)……	76.6

While this estimate covered the State of Minnesota only, in view of the fact that prior to the recent acquisitions in the Baraboo district of Wisconsin over 80 per cent of the Steel Corporation's ore reserves, excluding the Hill holdings, were in Minnesota, it will be seen that these figures give a fairly complete idea of the position of the Steel Corporation in this respect. Including the Hill ores, it is probable that over 90 per cent of the Steel Corporation's known supply of Lake ore at the close of 1907 was in the State of Minnesota.

In this connection it may be noted that the secretary of the Minnesota Tax Commission, in a letter to the Commissioner of Corporations dated May 12, 1909, said:

> They [the United States Steel Corporation] now control at least 80 per cent of the present known tonnage in the State.

In the old ranges of Michigan the Corporation probably has a somewhat smaller proportion of the total ore deposits. However, its proportion on the Michigan ranges is large.

A further indication of the proportion of the total amount of ore in the Lake Superior region, controlled by the United States Steel Corporation, is furnished by data submitted to the Finance Committee of the United States Senate in 1909, by Joseph G. Butler, jr., of the Brier Hill Iron and Coal Company, and head of the Bessemer Pig Iron Association. Mr. Butler's evidence included, among other data, a report from John Birkinbine, a mining engineer of Philadelphia, and also certain statistics furnished by the Steel Corporation itself.

The Steel Corporation's estimate of its iron ore reserves thus furnished Mr. Butler follows:

	Ores of present standard commercially.	Silicious and other low-grade ores.	Total.
	Gr. tons.	*Gr. tons.*	*Gr. tons.*
Northern ores	1,258,289,000	365,845,000	1,624,134,000
Southern ores	459,300,000	239,000,000	698,300,000
Total	1,717,589,000	604,845,000	2,322,434,000

Mr. Butler placed the total amount of commercially available ore in the United States at that time at 4,462,940,000 tons, as follows:

	Tons.
Lake Superior region	1, 618, 000, 000
New York	750, 000, 000
New Jersey	135, 000, 000
Pennsylvania	45, 000, 000
South	1, 814, 940, 000
Rocky Mountain district	100, 000, 000
Total	4, 462, 940, 000

Applying the Corporation's estimate of its total commercially available tonnage in all parts of the country, namely, 1,717,589,000 tons, to his estimated total, Mr. Butler arrived at the conclusion that the Steel Corporation then owned 38½ per cent of the available or desirable ores of the country.

As already made clear, however, such comparisons—disregarding for the moment the question whether Mr. Butler's total can be accepted—are of little significance because of the fact that the steel industry is essentially based upon the ores of the Lake Superior district. In this connection it may be noted that Mr. Birkinbine, the engineer above referred to, reported to Mr. Butler, after reviewing numerous estimates of the probable extent of the deposit of the Lake Superior region, "that an estimate of 1,600,000,000 tons of reserves in the Lake Superior region was conservative." Mr. Birkinbine, however, went on to say:

> But the remarkable economies which have been achieved in mining, handling and transporting ore in large quantities, the advances in beneficiating processes, the problems in the near future of the material expansion of the iron-producing industry in the upper Lake region, may bring many ores not now considered available in the shipping list, thus greatly augmenting the reserves. * * *

Taking the estimate of 1,600,000,000 tons for the total commercially available ore of the Lake Superior region at that particular time, the Steel Corporation's estimate of 1,258,289,000 tons for its holdings would be equivalent to well over 75 per cent of this total. Of course, the ideas of the consulting engineer and those of the Steel Corporation's experts as to what were commercially available ores may have differed somewhat, but it is not likely that the proportion of ore controlled by the Steel Corporation as shown by these two estimates is too high, because both of these statements were submitted by Mr. Butler together with extensive data for other ore supplies in the United States for the avowed purpose of proving that the proportion of the ore supply controlled by the Steel Corporation was less than 85 per cent of the total supply.

In 1908 the commercially available ore of the Lake Superior region was computed by the United States Geological Survey, for the Conservation Commission, at 3,500,000,000 tons, but the iron content assumed as a basis for available ore was very much lower than in the two preceding estimates, thus greatly increasing the total quantity. This and other evidence indicates that the Survey estimate is not fairly comparable with that of the Corporation.

At the beginning of 1908 the United States Steel Corporation estimated its total ore reserves in the Lake Superior region, not including the very extensive deposits covered by the so-called Hill lease, at approximately 1,200,000,000 tons. This estimate was largely based upon very careful prospecting operations, a very large proportion of the Steel Corporation's ore lands in the Lake Superior region having been very thoroughly drilled upon, with careful records of depths, analyses, etc. Adding 300,000,000 tons as a conservative estimate for the tonnage covered by the Hill lease would give the Corporation control in the ore ranges of Minnesota and Michigan of 1,500,000,000 tons. In the South, as already shown, the Corporation has a reserve tonnage which may fairly be placed at not less than 500,000,000 tons.

In these three districts, therefore, the present tonnage of the Steel Corporation which may be considered as a fairly definitely known or developed tonnage, is not less than 2,000,000,000 tons. Including its holdings in the Baraboo district and some miscellaneous holdings the total ore of the Corporation may be conservatively estimated at not less than 2,500,000,000 tons.

Many facts point to a policy on the part of the Steel Corporation of securing control of the ore deposits of the country far in advance of its immediate needs. As clearly brought out in Chapter V, the most logical explanation of the Hill lease with its extraordinary royalty and other onerous conditions is that the Corporation desired to prevent these ores from coming into the hands of competitors. The acquisition of the Tennessee Coal, Iron and Railroad Company likewise apparently was desirable more on account of the enormous ore and coal reserves of the company than because of its manufacturing plants, although these ores at present have a low value. Furthermore, the Corporation has examined a large amount of ore territory under option and has added greatly to its holdings of ore in consequence, notably in the case of the Baraboo district. The Corporation also secured a deposit of ore in Cuba, estimated to contain fully 60,000,000 tons. At one time the Corporation held extensive options on ore lands on the Cuyuna Range in Minnesota and also in Canada, but it is stated that many of these options proved to contain little ore and were given up.

These various acquisitions certainly indicate a rather definite policy on the part of the Corporation to increase its control of the ore reserves of the country. In this connection, it may be noted that E. H. Gary, chairman of the Steel Corporation, in testimony before the Ways and Means Committee in 1908, admitted that the Corporation had control of the ultimate ore supply of the entire country, as the following excerpt will show:

> Mr. COCKRAN. You practically do control the ore supply of the country?
>
> Mr. GARY. No; not now; not for the immediate future.
>
> Mr. COCKRAN. Well, the ultimate supply?
>
> Mr. GARY. Yes; I think so—that is, pretty nearly. It is not absolute control.

Recently Mr. Gary substantially modified and in part withdrew this statement.

The system of leasing ore mines, as employed in the Lake region, is important in this connection. A very large part (approximately two-thirds in 1910) of the Corporation's total holdings in the Lake region is held by lease. Frequently there is no initial investment in such leaseholds, and even where a bonus is paid it is usually small, while the minimum tonnage on which royalty must be paid, whether mining operations are conducted or not, is generally unimportant. The Hill lease is, of course, as above shown, a very marked exception in the last respect.

It will be seen, therefore, that this ore-leasing system, where there is no limit placed on the number of leases that can be combined under a single interest, greatly facilitates the gathering in by a great concern like the Steel Corporation of a vast amount of ore reserves, far in advance of any commercial need for them. This not only prevents others from getting such property but also secures to such a concern the benefit of any appreciation in value which may come about either from natural causes or as a result of this very concentration of ownership. Obviously, a system which thus lends itself to such marked concentration of ore property for many years in advance (a common term of lease being fifty years), at a comparatively small cost, involves questions of the highest public importance. It might be said that the lease system as thus applied in the Lake ore region really affords an opportunity for a wealthy interest to attempt a corner in ore reserves on what is, in effect, a margin basis.

Of course, in such extensive acquisitions there is a decided speculative risk, just as in similar efforts to control commodity markets, particularly the possibility of the discovery of available deposits elsewhere, or new methods of mining which may render available what are now nonavailable ores for present commercial purposes. Taking conditions as they are to-day, however, there can be no doubt that the Steel Corporation has control of the great bulk of the commercially available ores of the Lake Superior district, its proportion probably being about three-fourths of the total. This dominating position in the ore industry enjoyed by the Steel Corporation through this great ownership of ore reserves is heightened because of its very marked degree of control of the transportation of ore in the Lake Superior district.

EXHIBITS.

Exhibit 1.

UNDERWRITING AGREEMENT OF MARCH 1, 1901, BETWEEN J. P. MORGAN & CO. AND THE UNITED STATES STEEL CORPORATION.

An agreement, made this first day of March, nineteen hundred and one, by and between United States Steel Corporation, a corporation existing under the laws of the State of New Jersey (hereinafter called the " Steel Company "), party of the first part, and J. P. Morgan & Co., of the city of New York, acting in behalf of a Syndicate, party of the second part:

Whereas, the Steel Company has been organized with a capital of $3,000, of which one-half is 7% cumulative preferred stock and one-half is common stock, as shown by the certificate of incorporation of the Steel Company, recorded in Hudson County, New Jersey, on the 25th day of February, 1901, which capital stock is to be increased as hereinafter provided; and

Whereas, as hereinafter stated, the board of directors of the Steel Company deem it necessary for its business now to acquire the stocks and bonds of certain other corporations and also to obtain for its corporate purposes a certain sum in cash; and

Whereas, after careful investigation and appraisement, the board of directors of the Steel Company has ascertained, adjudged and determined that the value of such bonds and stocks now so to be acquired and hereinafter specified, exclusive of such cash sum (which cash sum is to be received and treated by the Steel Company as surplus), is equal at least to the par value of the stock of the Steel Company and of the bonds of the Steel Company to be issued therefor; and

Whereas, the board of directors of the Steel Company considers that such bonds, stocks and cash may best be obtained by purchase, on the terms hereinafter stated, from the Syndicate represented by Messrs. J. P. Morgan & Co., party of the second part hereto, and managers of the said Syndicate; and

Whereas, each of the corporations, the capital stock of which it is proposed now to acquire hereunder, has been organized and now is existing under the laws of the State of New Jersey, and has outstanding capital stock divided into shares each of the par value of $100 (excepting the Carnegie Company, of which the capital stock is divided into shares of the par value of $1,000), and divided, also, into classes as next hereinafter stated, the said corporations, and the total outstanding capital stock and the classes thereof, being as follows, to wit:

Name of corporation.	Total outstanding capital stock.	
	Preferred.	Common.
American Sheet Steel Company	$24,500,000	$24,500,000
American Steel Hoop Company	14,000,000	19,000,000
American Steel and Wire Company	40,000,000	50,000,000
American Tin Plate Company	18,325,000	28,000,000
Carnegie Company		160,000,000
Federal Steel Company	53,260,900	46,484,300
National Steel Company	27,000,000	32,000,000
National Tube Company	40,000,000	40,000,000

And whereas, the Carnegie Company has issued, and there are now outstanding, its 5% bonds for the aggregate principal sum of $160,000,000: and

Whereas, the Syndicate has arranged for the acquisition of substantially all of the bonds and the stock of the Carnegie Company; and

Whereas, in reliance upon this contract the Syndicate is endeavoring to effect the acquisition, and the delivery of all of the bonds of the Carnegie Company, and all of the outstanding shares of the capital stock of all of said corporations, upon the terms herein provided.

Now, therefore, in consideration of the premises and of other good and valuable considerations, and of the efforts and expenses which both parties recognize will have to be made and incurred by the Syndicate in their endeavor to consummate such sale:

First. The Steel Company agrees with J. P. Morgan & Co., acting in behalf of the Syndicate, as follows:

(1) If, on or before May 31, 1901, J. P. Morgan & Co. in behalf of the Syndicate shall

(*a*) Sell and deliver, or cause to be sold and delivered, to the Steel Company, at least fifty-one per cent of such outstanding shares of the capital stock of each of the corporations above named, or of such of said corporations as finally shall be embraced within the operation of this agreement with the approval of the Steel Company, which fifty-one per cent of the total outstanding capital stock of each of such corporations shall include not less than fifty-one per cent of the total outstanding preferred stock, if any, of such company; and also all of the $160,000,000 of bonds of the Carnegie Company now outstanding, or such lesser amount thereof as shall be tendered by J. P. Morgan & Co.; and

(*b*) Shall pay, or shall cause to be paid, to the Steel Company twenty-five million dollars in cash:

(2) The Steel Company will purchase such shares and bonds, and, in payment and consideration for such stock and bonds and for such cash, will issue to such persons as J. P. Morgan & Co., in behalf of the Syndicate, shall indicate, shares of its preferred stock and shares of its common stock (all of which shall be fully paid and non-assessable), and also its five per cent gold bonds (which bonds shall be

of such form and tenor, and shall be secured, as J. P. Morgan & Co. may determine), as follows:

(*a*) In the event that the Steel Company shall acquire all the shares of the capital stock of all of such other corporations and all such bonds of the Carnegie Company, the Steel Company will issue for all such stock, and such bonds, and such sum in cash, four million two hundred and forty-nine thousand nine hundred and eighty-five shares of its preferred stock, and four million two hundred and forty-nine thousand nine hundred and eighty-five shares of its common stock, and also three hundred and four million dollars of its said five per cent gold bonds.

(*b*) In the event that the Steel Company shall not acquire all the shares of the capital stock of all of such other corporations and all such bonds of the Carnegie Company, the Steel Company will issue for the shares of stock and the bonds which shall be acquired, and said sum in cash, four million two hundred and forty-nine thousand nine hundred and eighty-five (4,249,985) shares of its preferred stock, and four million two hundred and forty-nine thousand nine hundred and eighty-five (4,249,985) shares of its common stock, and three hundred and four million dollars ($304,000,000) of its five per cent gold bonds, less abatement and deduction therefrom to be made as follows:

For each $100 par value of stock of such other companies mentioned in the following table, which shall not be acquired by the Steel Company, the amount of the preferred stock and common stock, or either, set opposite to such class of stock in said table shall be deducted and abated.

Name of company and class of stock.	Amount of stock to be deducted in par value.	
	Preferred stock.	Common stock.
Carnegie Company	$150.00	$150.00
Federal Steel Co.:		
Preferred stock	110.00	
Common stock	4.00	107.50
American Steel and Wire Co. of N. J.:		
Preferred stock	117.50	
Common stock		102.50
National Tube Co.:		
Preferred stock	125.00	
Common stock	8.80	125.00
National Steel Co.:		
Preferred stock	125.00	
Common stock		125.00
American Tin Plate Co.:		
Preferred stock	$125.00	
Common stock	20.00	$125.00
American Steel Hoop Co.:		
Preferred stock	100.00	
Common stock		100.00
American Sheet Steel Co.:		
Preferred stock	100.00	
Common stock		100.00

For each $1,000 par value of such bonds of the Carnegie Company that shall not be acquired by the Steel Company $1,000 par value of such bonds of the Steel Company shall be abated and deducted.

Second. The Steel Company further agrees that in the event of the acquisition by it pursuant to this agreement of less than the total issue of said bonds of the Carnegie Company or less than the total outstanding capital stock of each of said corporations, the Steel Company from time to time will purchase from such persons as shall be indicated by J. P. Morgan & Co., any and all additional outstanding bonds of the Carnegie Company or shares of the capital stock of any of said corporations that shall be tendered to the Steel Company prior to May 1, 1902; and in payment therefor will issue and deliver its bonds and fully paid-up shares of its preferred stock and fully paid-up shares of its common stock, at the rates at which deduction and abatement shall have been made under Article First hereof in respect of the additional bonds and shares of stock so purchased.

Third. The Steel Company shall credit and allow to J. P. Morgan & Co. on account of the cash sum payable under Article First hereof, or shall pay to J. P. Morgan & Co. a sum equal to the aggregate amount which, prior to April 1, 1901, shall have accrued upon any installments of dividends accruing, but not matured, on any such preferred stock at the date of delivery thereof to the Steel Company.

The Steel Company further agrees that the dividends on all the preferred stock of the Steel Company to be issued by it hereunder, shall begin to accrue from April 1, 1901.

Fourth. The Steel Company, without prejudice to the further exercise of its chartered rights to increase or to decrease its capital stock, agrees that it will lawfully increase its authorized capital stock to an amount sufficient to enable it to issue and to deliver its preferred stock and its common stock to the aggregate amount hereinbefore provided.

Fifth. J. P. Morgan & Co., in behalf of the Syndicate, will bear and will pay the statutory fees and taxes for the proposed increase of the capital stock of the Steel Company.

Sixth. This agreement, and any agreement in pursuance thereof, is and shall be strictly *inter partes;* and no stockholder of any of the corporations above referred to shall be deemed to have any right hereunder.

In witness whereof, these presents have been duly executed by the parties hereto the day and year first above written.

UNITED STATES STEEL CORPORATION,
[L. S.] By W. J. CURTIS, *President.*
Attest:
CHARLES MAC VEAGH,
Secretary, J. P. Morgan & Co.

EXHIBIT 2.

UNDERWRITING AGREEMENT OF APRIL 1, 1901, BETWEEN J. P. MORGAN & CO. AND THE UNITED STATES STEEL CORPORATION.

An agreement, made this 1st day of April, nineteen hundred and one, by and between United States Steel Corporation, a corporation existing under the laws of the State of New Jersey (hereinafter called the "Steel Company"), party of the first part, and J. P. Morgan & Co., of the city of New York, parties of the second part:

Whereas, the Steel Company has been organized with a capital stock of $3,000, of which one-half is 7 per cent cumulative preferred stock and one-half is common stock, as shown by the certificate of incorporation of the Steel Company, recorded in Hudson County, New Jersey, on the 25th day of February, 1901, which capital stock is to be increased as provided in a certain agreement dated March 1, 1901, between the Steel Company and J. P. Morgan & Co., acting in behalf of a Syndicate; and

Whereas, the board of directors of the Steel Company deem it necessary for its business now to acquire the stocks of the other corporations hereinafter named, and, after careful investigation and appraisement, the board of directors of the Steel Company has ascertained, adjudged and determined that the value of such stocks now so to be acquired and hereinafter specified, is equal at least to the par value of the stocks of the Steel Company together with the sums in cash to be issued and paid therefor as hereinafter provided; and

Whereas, the board of directors of the Steel Company considers that such stocks may best be obtained by purchase, on the terms hereinafter stated, through Messrs. J. P. Morgan & Co., parties of the second part hereto; and

Whereas, the names of said corporations and the classes and amounts of the capital stock thereof which the Steel Company desires to acquire are as follows:

The Lake Superior Consolidated Iron Mines (a corporation of New Jersey) 298,884–4897/10000 shares, of the aggregate par value of $29,888,448.97.

Bessemer Steamship Company (a corporation of West Virginia) 50,000 shares of the aggregate par value of $5,000,000.

American Bridge Company (a corporation of New Jersey) 313,738 shares of preferred stock, of the aggregate par value of $31,373,800, and 309,508 shares of common stock, of the aggregate par value of $30,950,800.

Colorado Fuel and Iron Company (a corporation of Colorado) 20,000 shares of preferred stock, of the aggregate par value of $2,000,000, and 170,000 shares of common stock, of the aggregate par value of $17,000,000.

Oliver Iron Mining Company (a corporation of Minnesota) 2,000 shares, of the aggregate par value of $200,000, out of a total capital stock of $1,200,000.

Pittsburgh Steamship Company (a corporation of West Virginia), 2,217 shares, of the aggregate par value of $221,700, out of a total outstanding capital stock of $1,333,000.

And whereas, J. P. Morgan & Co. have heretofore rendered services for the purpose of acquiring such stocks of said several companies for the benefit of the Steel Company, and the Steel Company desires that J. P. Morgan & Co. shall render further services for the purpose of acquiring such stocks:

Now, therefore, in consideration of the premises and of other good and valuable considerations, and of the efforts and expenses which both parties recognize, will have to be made and incurred by Messrs. J. P. Morgan & Co. under this agreement:

First. The Steel Company agrees with J. P. Morgan & Co. as follows:

(1) If on or before May 31st, 1901, J. P. Morgan & Co. shall procure the sale and delivery to the Steel Company of all, or any part, not less than fifty-one per cent, of such outstanding shares of the capital stock of said Lake Superior Consolidated Iron Mines, the Steel Company will purchase such shares, and in payment and con-

sideration therefor will issue to the respective vendors thereof, or for their account, as may be directed by J. P. Morgan & Co., $135 in the preferred stock and $135 in the common stock of the Steel Company (all of which shall be fully paid and non-assessable) for each $100 par value of such shares of the capital stock of said Lake Superior Consolidated Iron Mines so sold and delivered to the Steel Company.

Such stock of said Lake Superior Consolidated Iron Mines must carry all dividends and rights to dividends declared or payable after March 15, 1901. Dividends on the preferred stock of the Steel Company to be issued in part payment therefor shall begin to accrue from April 1st, 1901.

(2) If on or before May 31st, 1901, J. P. Morgan & Co. shall procure the sale and delivery to the Steel Company, or an agreement for the sale and delivery to the Steel Company, of all the shares of the capital stock of said Bessemer Steamship Company, the Steel Company will purchase such shares of stock and will agree to pay therefor the sum of $8,500,000 in cash on or before May 1, 1902, with interest from May 1, 1901, at the rate of five per cent per annum.

Such stock of the Bessemer Steamship Co. must carry all dividends and rights to dividends declared or payable after March 15, 1901.

(3) If on or before May 31st, 1901, J. P. Morgan & Co., shall procure the sale and delivery to the Steel Company of said shares of the capital stock of said Oliver Iron Mining Company, of the aggregate par value of $200,000, together with said shares of the capital stock of said Pittsburgh Steamship Company of the aggregate par value of $221,700, the Steel Company will purchase such shares and, in payment and consideration therefor will issue to the vendors thereof, or for their account, as may be directed by J. P. Morgan & Co., 92,500 shares of its preferred stock of the aggregate par value of $9,250,000 and 92,500 shares of its common stock of the aggregate par value of $9,250,000, all of which shall be fully paid and non-assessable.

Such shares of stock of the Oliver Iron Mining Company must carry all dividends and rights to dividends declared or payable after March 27th, 1901; and dividends on the preferred stock of the Steel Company to be issued in part payment therefor shall begin to accrue from April 1st, 1901.

(4) If on or before May 31st, 1901, J. P. Morgan & Co. shall procure the sale and delivery to the Steel Company of all, or any part not less than fifty-one per cent, of said total outstanding capital stock of the American Bridge Company (which fifty-one per cent of the total outstanding capital stock shall include not less than fifty-one per cent of the total outstanding preferred stock of said American Bridge Company), the Steel Company will purchase such shares, and in payment and consideration therefor will issue to the vendors thereof, or for their account as may be directed by J. P. Morgan & Co., shares of the preferred stock and common stock of the Steel Company (all of which shall be fully paid and non-assessable) at the following rates:

For each $100 share of the preferred stock of the American Bridge Company sold and delivered to the Steel Company, $110 par value in the preferred stock of the Steel Company.

For each $100 share of the common stock of the American Bridge Company sold and delivered to the Steel Company, $105 par value in the common stock of the Steel Company.

Such preferred stock of the American Bridge Company shall not carry the dividend of 1¾ per cent declared payable thereon April 24, 1901, but must carry all other dividends and rights to dividends declared or payable after April 1st, 1901; and such common stock of the American Bridge Company must carry all dividends and rights to dividends declared or payable after March 15th, 1901. Dividends on the preferred stock of the Steel Company to be issued for such preferred stock of the American Bridge Company shall begin to accrue from April 1st, 1901.

(5) The Steel Company hereby authorizes and requests J. P. Morgan & Co., for account of the Steel Company, to purchase or acquire, or to contract for the purchase or acquisition of, all or any of the outstanding shares of the capital stock of the Colorado Fuel & Iron Company, in consideration of the issue by the Steel Company in payment therefor of such amount of the preferred stock and common stock of the Steel Company as, from time to time, may be fixed by J. P. Morgan & Co., not exceeding in the aggregate $15,000,000 in the preferred stock and $15,000,000 in the common stock of the Steel Company in case all said outstanding 19,000 [190,000] shares of the Colorado Fuel & Iron Company shall be so purchased or acquired, and not exceeding a proportionate amount of such preferred stock and of such common stock of the Steel Company for any number less than all of such outstanding 19,000 [190,000] shares that may be so purchased or acquired.

(6) The Steel Company requests J. P. Morgan & Co. to endeavor to procure the sale and delivery to it on said terms of such shares of capital stock of said several corporations or any of them, and hereby it authorizes J. P. Morgan & Co., in their own name, or otherwise, by public notice or otherwise, to offer to the several stockholders of said several corporations, or any of them, in exchange for stocks in said corporations, respectively, certificates for preferred stock and common stock of the Steel Company on the terms aforesaid. Any such offer may require the deposit of such stocks with J. P. Morgan & Co. as depositaries, or with any other depositaries designated by them, and may be made subject to any other further terms and conditions that may be prescribed by J. P. Morgan & Co.

The Steel Company will increase its capital stock to such amount as may be required for the purpose of making the purchases hereby authorized.

(7) The Steel Company authorizes and requests J. P. Morgan & Co. to make all agreements, and to do all acts and things, and to make any expenditures which, in their sole discretion, they may deem expedient for the purpose of acquiring such shares of stock, or any of them as aforesaid; and the Steel Company agrees to reimburse J. P. Morgan & Co. for all such expenditures and to pay all other expenses of any description made or incurred by J. P. Morgan & Co. in acting hereunder. The Steel Company further agrees to pay to J. P. Morgan & Co. fair compensation for their services hereunder.

Second. J. P. Morgan & Co. agree to endeavor to procure the sale and delivery to the Steel Company, on the terms aforesaid, of said stocks of said several corporations, and they agree to include in any sale of stocks of the American Bridge Company all of the shares of the common stock and preferred stock of said company by them owned. J. P. Morgan & Co. further agree that they will make an offer to the stockholders of the American Bridge Company, and of the Lake Superior Consolidated Iron Mines, inviting them to receive in exchange for their stocks, certificates for preferred stock and common stock of the Steel Company on the terms aforesaid.

In witness whereof, these presents have been duly executed by the parties hereto the day and year first above written.

UNITED STATES STEEL CORPORATION.
By ——— ———, *President.*

Attest:
——— ———, *Secretary.*

EXHIBIT 3.

SYNDICATE AGREEMENT OF FEBRUARY 26, 1901, BETWEEN J. P. MORGAN & CO. AND THE SYNDICATE SUBSCRIBERS RELATIVE TO ORGANIZATION OF THE UNITED STATES STEEL CORPORATION.

An agreement, made as of the 26th day of February, nineteen hundred and one, by and between J. P. Morgan & Co., of the city of New York, parties of the first part, and the subscribers hereto (hereinafter called severally the " Subscribers " and collectively the " Syndicate "), severally, parties of the second part:

Whereas, the United States Steel Corporation has been organized under the laws of the State of New Jersey, with a capital stock of $3,000, of which one-half is seven per cent cumulative preferred stock and one-half is common stock, which capital stock presently is to be increased to such amount as shall be approved by J. P. Morgan & Co., and such corporation (hereinafter called the " Steel Company ") desires now to acquire, as hereinafter provided, stocks and bonds of all or of some of the several corporations next hereinafter referred to, and certain sums in cash; and

Whereas, J. P. Morgan & Co., acting in behalf of the Syndicate, are hereby authorized to enter, and now are about to enter, into a contract or contracts with the Steel Company, by which the Steel Company is to agree to issue to such persons as J. P. Morgan & Co. in behalf of the Syndicate shall indicate, shares of its preferred stock and shares of its common stock (all of which shall be fully paid and non-assessable) and also its five per cent gold bonds, in payment and in consideration for outstanding bonds of the Carnegie Company, and shares of the outstanding preferred stock and common stock of the following named companies, or some of them, as shall be agreed upon or be provided for in such contract or contracts:

American Sheet Steel Company,
American Steel Hoop Company,
American Steel and Wire Company of New Jersey,
American Tin Plate Company,
Carnegie Company,
Federal Steel Company,
National Steel Company,
National Tube Company.

Now, therefore, in consideration of the premises and of the mutual promises herein contained, J. P. Morgan & Co. and the Syndicate have mutually agreed as follows:

First. J. P. Morgan & Co. shall have power and authority from time to time, in such manner and on such terms as from time to time, either generally or in special cases, they may deem expedient:

(1) Publicly or otherwise to offer, or to agree to deliver, or to cause to be delivered, in such amounts and at such general or special rates as, from time to time, either generally or in special cases, they may deem expedient, shares of the preferred stock, and shares of the common stock, and bonds, of the Steel Company, in exchange for or in purchase of any of the stocks of any of the other companies named in said proposed contracts, that shall be delivered to J. P. Morgan & Co., or as they may direct; and

(2) By the use of any of the stocks, or of any of the bonds, of the Steel Company, deliverable under said proposed contracts, or of moneys provided or derived under the terms of this agreement, to acquire all or any of the stocks, or of the bonds, or both, of all or of any of the other companies above referred to.

Second. From time to time, upon calls made by J. P. Morgan & Co., and within such periods as shall be specified in such calls, the Subscribers, severally and respectively, will pay to J. P. Morgan & Co. such sums in cash, as shall be called by J. P. Morgan & Co., but in the aggregate, not exceeding their respective subscriptions hereunder.

Third. J. P. Morgan & Co., in the exercise of their absolute discretion, may use the sums in cash so received from the Subscribers, for all or any of the following purposes, viz:

(1) In payment to the Steel Company of any sum in cash by it to be received under said proposed contracts, and any further sums that may become payable to the Steel Company under any agreement modifying the same or supplemental thereto.

(2) For any expenditures which J. P. Morgan & Co. in their discretion may have incurred or hereafter may incur in or about the preparation or the performance of this agreement or of said proposed contracts, or for any purpose which, in their judgment, may tend to promote the objects of this agreement or the benefit of the Syndicate hereunder.

(3) In acquiring, by purchase or otherwise, as hereinbefore authorized by clause (2) of Article First of this agreement, any of the preferred stock and common stock and bonds of the companies hereinabove referred to.

All or any of such stocks and bonds of such other companies, so acquired by J. P. Morgan & Co., may be delivered by them under the terms of said proposed contracts to the Steel Company, in exchange for its stocks and bonds as therein provided; or, in their discretion, J. P. Morgan & Co. may re-sell to others all or any of such stocks and bonds.

Fourth. J. P. Morgan & Co. may retain all of said stocks of the Steel Company, to be received pursuant to said proposed contracts (except such of said stocks as by them shall be used or be set apart for use under Article First of this agreement) for such period as in their discretion they may deem expedient, not exceeding fifteen months from the date hereof; and, from time to time, during said period and at any time before final distribution hereunder, they may sell, all or any of such stocks, at public or private sale and at such prices, and on such terms as to credit or otherwise, as they may deem expedient.

Fifth. All such stocks of the Steel Company mentioned in Article Fourth hereof, and all net proceeds resulting from sales of any of such stocks or from any other transactions of J. P. Morgan & Co., for account of the Syndicate under any of the provisions hereof, shall be applied by J. P. Morgan & Co. as follows:

(1) First, to the payment of any and all expenses and obligations incurred by J. P. Morgan & Co. under any provision of this agreement.

(2) Secondly, in repayment to the Subscribers (so far as the same may be sufficient for that purpose) of all sums by them respectively paid to J. P. Morgan & Co. pursuant to Article Second; such repayment to be made to the Subscribers ratably.

(3) One-fifth of any residue of such stocks and net proceeds remaining after payment in full of all such sums payable under clauses (1) and (2) of this article shall be retained by, and shall belong to, J. P. Morgan & Co. for their own use, as compensation for their services in forming and managing the Syndicate: and the remaining four-fifths of such residue shall be distributed by J. P. Morgan & Co. among the Subscribers ratably according to their respective interests.

Such one-fifth of any such residue shall be the only compensation to be received by J. P. Morgan & Co. for their services in forming and managing the Syndicate; and, in case there shall be no such residue, J. P. Morgan & Co. shall not receive any compensation for their services in forming or in managing the Syndicate.

Any stocks or other assets comprised in such residue may be sold by J. P. Morgan & Co., or may be distributed by them as they may deem expedient.

Such application of such net proceeds and such distribution of such residue, may be made by J. P. Morgan & Co. from time to time when and as they may deem expedient.

All cash sums received by J. P. Morgan & Co. under any provision of this agreement shall be held by them as bankers.

Sixth. Until the expiration of such fifteen months, or until the final distribution hereunder, J. P. Morgan & Co. in such manner, at such prices, on such terms, and in such amounts, as they may deem expedient, shall have power, for account of the Syndicate, to make purchases of the bonds and of the preferred stock and of the common stock of the Steel Company, and they may resell any such bonds and stocks which they may have purchased; and, in their discretion, they may make any further undertakings of any kind with any persons concerning any such bonds and stocks. They may apply towards any such purchases any sums realized from any sales of bonds and stocks of the Steel Company under any provision of this agreement; and they may make advances, or may procure loans, and may secure the same to such amounts and in such manner as from time to time they may deem expedient for any of the purposes of this agreement.

Seventh. J. P. Morgan & Co. shall issue to the Subscribers suitable receipts in respect of payments made hereunder, and they may issue to the respective Subscribers certificates of interest, of such tenor and form as they may deem suitable. Such certificates of interest and all rights and obligations hereunder of the respective Subscribers may be made transferable in such manner and on such terms and conditions as J. P. Morgan & Co. may prescribe.

Eighth. J. P. Morgan & Co. shall have authority, from time to time and at any time, to incur such expenses as they may deem proper in carrying out, or in endeavoring to carry out, this agreement or said proposed contracts, or in doing any act or thing which they may deem to be in the interest of the Syndicate; and they shall have power and authority, in their sole and absolute discretion, finally to fix and to pay all compensations of depositaries, brokers, agents and counsel, or others; and in the expense account may be included brokers' commissions as usually paid.

Ninth. For account of the Syndicate, J. P. Morgan & Co., from time to time, may make undertakings of any kind with any persons concerning, or for the acquisition of, bonds or shares of either or of both of the classes of stock of any of the companies hereinabove referred to, and they may make purchases thereof from the holders thereof, or in any market or otherwise, and may sell the same at such prices, on such terms and in such amounts as from time to time they may deem expedient.

Tenth. On signing this agreement each Subscriber shall indicate opposite his name the total sum of his subscription on account of the whole Syndicate obligation hereunder; and the several Subscribers shall be called upon to make payments in respect of their several subscriptions only ratably according to the respective amounts thereof, but each Subscriber shall be so responsible to the full extent of his undertaking, regardless of performance or non-performance by any other Subscriber.

When and as requested by J. P. Morgan & Co., and without reference to the receipt or the possession hereunder by J. P. Morgan & Co., or by the Subscribers of any bonds or stock, each Subscriber will make any and all payments, and will perform all of his undertakings under this agreement, and will do all things which by J. P. Morgan & Co. shall be deemed desirable to aid in the accomplishment of the purposes of this agreement.

Nothing herein contained or otherwise shall constitute the parties hereto partners, or shall render any one of the Subscribers liable to contribute more than his several proportionate amount as herein provided, or shall prevent any of the parties from contracting with each other with reference to any of their respective interests.

Eleventh. In case of any failure of any Subscriber to make any payment called for, or to perform any of his undertakings hereunder, J. P. Morgan & Co. in their sole and exclusive discretion may exclude such Subscriber from all interest in the Syndicate; and in their discretion and in such manner as they may deem proper, without any proceeding, either at law or in equity, they may dispose of such Subscriber's participation hereunder or of any interest or right of such Subscriber hereunder or under said proposed contracts; but nevertheless such Subscriber in default shall be responsible to J. P. Morgan & Co., for the benefit of the other Subscribers hereto, for all damages caused by any failure on his part. At any public sale under this article of any interest or right of any Subscriber, J. P. Morgan & Co., or any party hereto, may become purchaser for their, or for his own, benefit, without accountability.

Twelfth. J. P. Morgan & Co. shall have full power, in their discretion, to agree with the Steel Company upon the terms and provisions of such proposed contracts, and as to the amount of the preferred stock and the common stock and bonds of the Steel Company to be issued and delivered under said proposed contracts; and, also, they shall have full power and authority, from time to time to enter into any agreements with the Steel Company modifying the said proposed contracts as they may deem expedient. Any and all contracts with the Steel Company made by J. P. Morgan & Co. in behalf of the Syndicate shall be open to inspection by any Subscriber at the office of J. P. Morgan & Co.

Thirteenth. J. P. Morgan & Co. shall be the sole and final judges as to whether at any time it is to the interest of the Syndicate to proceed further under this agreement or under said proposed contracts; and whenever they may deem expedient, they may abandon the objects contemplated in this agreement and said proposed contracts and all further proceedings thereunder. In such event all the stocks and other assets by them acquired hereunder and then held for account of the Syndicate, and the proceeds of such stocks and other assets shall remain charged with the payment of all expenses and liabilities by them incurred hereunder and shall be applied:

First, to the payment of any and all expenses and obligations incurred by J. P. Morgan & Co. under any provision of this agreement;

Secondly, in repayment to the Subscribers (so far as the same may be sufficient for that purpose) of all sums by them respectively paid to J. P. Morgan & Co. pursuant to Article Second; such repayment to be made to the Subscribers ratably.

From time to time J. P. Morgan & Co. may sell or otherwise dispose of such stocks and other assets at such prices and on such terms as to credit or otherwise as they may deem expedient; or they may distribute the same to Subscribers ratably.

Fourteenth. The enumeration of specific powers in this agreement shall not be construed as in any way limiting any general power intended to be conferred upon or to be reserved to J. P. Morgan & Co.; it being intended to reserve to them, and hereby there are expressly conferred on them, in addition to the general and specific powers recited herein, all other general and specific powers which from time to time they may deem necessary in order fully and effectively to carry out what they may deem to be the purposes of this agreement, and of this Syndicate, whether or not such purposes be herein expressed.

J. P. Morgan & Co. in their discretion may submit to the Subscribers any proposed change or modification of this agreement, and, when assented to in writing by a majority in interest of the Subscribers, any change or modification so submitted by J. P. Morgan & Co. shall become a part of this agreement and shall be binding upon all the Subscribers and those claiming under them.

Fifteenth. J. P. Morgan & Co. shall not be liable for any error of judgment or for any mistake of law or of fact; nor shall they be liable for any act or omission while endeavoring in good faith to carry out the purposes hereof according to their judgment. No obligation or liability, in addition to those herein expressed, shall be implied against J. P. Morgan & Co.

In no event shall J. P. Morgan & Co. be responsible for the repayment to the Subscribers of the sums by them paid under Article Second hereof; but such sums shall be repayable only as herein provided, out of any stocks or other assets applicable to such payment under the provisions of this agreement.

Sixteenth. J. P. Morgan & Co. may become Subscribers hereto. As such Subscribers they shall be liable for any subscriptions made by them, and shall be entitled in all respects to the same rights and benefits as other Subscribers.

J. P. Morgan & Co. may sell any stocks or other assets by them held hereunder to any other Subscriber; and any such other Subscriber may make any purchase from J. P. Morgan & Co.

From time to time J. P. Morgan & Co. may offer, on such terms as they may deem expedient, to sell any such stocks or other assets to the Subscribers severally and ratably in amounts proportionate to their respective syndicate subscriptions; and in any such offering they may provide for the disposition of any untaken stocks or other assets in such way as they may deem expedient. Upon any offering J. P. Morgan & Co., as syndicate Subscribers, shall be entitled, the same as other Subscribers to the benefits of such offering and to purchase their ratable amount of the stocks or other assets so offered and to hold the same without further accountability.

Seventeenth. J. P. Morgan & Co. may receive and may hold, or may cause to be received and to be held by any depositaries or custodians, the certificates for any stocks or any bonds of the Steel Company, and any bonds of the Carnegie Company and the certificates for any stocks of all or of any of the other companies hereinabove referred to, and they shall not be responsible for any act or any omission of any such depositary or custodian. They shall have absolute control over the disposition of all such stocks and bonds held by them, or by any such depositary or custodian, and they may cause the same to be transferred to themselves, or, as they may deem expedient, to any person or persons, or corporation or corporations. While so held by them, or under their control, J. P. Morgan & Co. shall have the exclusive right, and hereby plenary and discretionary power is conferred upon them, to vote upon such stocks, or to cause the same to be voted by their nominees, or by any proxies appointed or selected by them, at all meetings of stockholders for the election of directors of any such company, and for any and all other purposes whatsoever.

Eighteenth. This agreement shall bind, and is for the benefit of, the parties hereto, and their respective executors and administrators; but no assignment hereunder shall be valid unless assented to in writing by J. P. Morgan & Co.

All rights and powers of J. P. Morgan & Co. hereunder shall vest in said firm as from time to time constituted, without further act or assignment.

Nineteenth. Nothing herein contained shall be construed as creating any trust or obligation whatsoever in favor of the Steel Company, or in favor of any stockholder of any of such other companies, or in favor of any person or corporation other than the Subscribers, nor any obligation in favor of the Subscribers, excepting only as herein is expressly provided.

Twentieth. Each Subscriber shall set opposite his subscription hereunder an address to which notices, calls or other communications may be sent, and any notice, call or other communication addressed to any Subscriber at the address so given, and either left at such address or mailed, shall be deemed actually given to such Subscriber, and shall be sufficient for all the purposes hereof. If any Subscriber shall fail so to furnish his address to J. P. Morgan & Co., he shall not be entitled to any notice of calls, or offers, or any other notice hereunder, and he shall be deemed to assent to any action of J. P. Morgan & Co.

In witness whereof, the parties of the first part have hereunto affixed their signatures, and the parties of the second part at various dates have affixed their subscriptions hereto, it being understood that for convenience this agreement may be subscribed in several parts and copies, with like force and effect as if all the subscriptions were upon one part or copy thereof.

Name.	Address.	Amount subscription in dollars.

Exhibit 4.

CIRCULAR LETTER OF MARCH 2, 1901, ADDRESSED BY J. P. MORGAN & CO. TO STOCKHOLDERS OF VARIOUS CONSTITUENT CONCERNS OF THE UNITED STATES STEEL CORPORATION.

March 2, 1901.

To the Stockholders of Federal Steel Company, National Steel Company, National Tube Company, American Steel and Wire Company of New Jersey, American Tin Plate Company, American Steel Hoop Company, American Sheet Steel Company.

The United States Steel Corporation has been organized under the laws of the State of New Jersey, with power, among other things, to acquire the outstanding preferred stocks and common stocks of the companies above named and the outstanding bonds and stock of the Carnegie Company.

A Syndicate, comprising leading financial interests throughout the United States and Europe, of which the undersigned are managers, has been formed by subscribers to the amount of $200,000,000 (including among such subscribers the undersigned and many large stockholders of the several companies), to carry out the arrangement hereinafter stated and to provide the sum in cash and the financial support required for that purpose. Such Syndicate, through the undersigned, has made a contract with the United States Steel Corporation, under which the latter is to issue and deliver its preferred stock and its common stock and its five per cent gold bonds in consideration for stocks of the above-named companies and bonds and stock of the Carnegie Company and the sum of $25,000,000 in cash.

The Syndicate has already arranged for the acquisition of substantially all the bonds and stock of the Carnegie Company, including Mr. Carnegie's holdings. The bonds of the United States Steel Corporation are to be used only to acquire bonds and 60 per cent of the stock of the Carnegie Company.

The undersigned, in behalf of the Syndicate, and on the terms and conditions hereinafter stated, offer in exchange for the preferred stocks and common stocks of the companies above named, respectively, certificates for preferred stock and common stock of the United States Steel Corporation, upon the basis stated in the following table, viz:

For each $100 par value of stock of the class mentioned below, the amount set opposite thereto in preferred stock or common stock of United States Steel Corporation at par:

Name of company and class of stock.	Amount of new stock to be delivered in par value.		Name of company and class of stock.	Amount of new stock to be delivered in par value.	
	Preferred stock.	Common stock.		Preferred stock.	Common stock.
Federal Steel Co.:			American Tin Plate Co.:		
Preferred stock	$110.00		Preferred stock	$125.00	
Common stock	4.00	$107.50	Common stock	20.00	$125.00
American Steel and Wire Co. of N. J.:			American Steel Hoop Co.:		
Preferred stock	117.50		Preferred stock	100.00	
Common stock		102.50	Common stock		100.00
National Tube Co.:			American Sheet Steel Co.:		
Preferred stock	125.00		Preferred stock	100.00	
Common stock	8.80	125.00	Common stock		100.00
National Steel Co.:					
Preferred stock	125.00				
Common stock		125.00			

With reference to the last four companies the aggregate amount of stocks so to be offered was arranged with the principal stockholders of those companies, who have requested the distribution of such amount among the four companies to be made in the percentages above stated.

Proper adjustment will be made in respect of dividends upon all the deposited preferred stocks, so that the registered holders of receipts for such preferred stocks will receive the equivalent of dividends thereon, at the rates therein provided, from the last dividend period up to April 1, 1901, from which date dividends on the preferred stock of the United States Steel Corporation are to begin to accrue. Deposited common stocks must carry all dividends or rights to dividends declared or payable on or after March 1, 1901, and no adjustment or allowance will be made in respect thereof.

For the purpose of avoiding the necessity of interruption in the declaration and payment of dividends, when earned, upon the common stock, concurrently with the payment of dividends upon the preferred stock, there has been inserted in the charter of the United

States Steel Corporation a provision to the effect that whenever all quarterly dividends accrued upon the preferred stock for previous quarters shall have been paid, the board of directors may declare dividends on the common stock out of any remaining surplus or net profits.

Statements furnished to us by officers of the several companies above named, and of the Carnegie Company, show that the aggregate of the net earnings of all the companies for the calendar year 1900 was amply sufficient to pay dividends on both classes of the new stocks, besides making provision for sinking funds and maintenance of properties. It is expected that by the consummation of the proposed arrangement the necessity of large deductions heretofore made on account of expenditures for improvements will be avoided, the amount of earnings applicable to dividends will be substantially increased and greater stability of investment will be assured, without necessarily increasing the prices of manufactured products.

The certificates for stocks of the companies above named must be deposited as stated below, in exchange for TRANSFERABLE RECEIPTS issued by the respective depositaries, for which application will be made for listing on the New York Stock Exchange. The deposited certificates must be accompanied by suitable assignments and powers of attorney in blank, duly executed and having attached thereto the proper war revenue stamps, and also, if required, suitable assignments or transfers of all dividends or rights to dividends upon deposited common stocks declared or payable on or after March 1, 1901. Every deposit shall be upon the following further terms and conditions:

1. The undersigned, acting in behalf of the Syndicate, shall have full control over the deposited certificates, including power to deliver the same under said contract to the United States Steel Corporation in consideration of the issue of preferred stock and common stock of said Corporation.

2. The certificates for shares of the United States Steel Corporation, deliverable to depositors, shall be delivered at an office or at offices in the city of New York to be designated by the undersigned by advertisement in at least two newspapers in the city of New York. Such certificates may be issued in the names of the respective holders of the receipts entitled thereto or may be issued in such other names as the undersigned may select, in which event they shall be indorsed for transfer in blank at the time of delivery. The undersigned at their option may deliver temporary certificates for such shares pending the preparation and delivery of engraved certificates.

3. At any time prior to the deposit hereunder of two-thirds in amount of all outstanding shares of the capital stock of any one or more of the above-named companies (which two-thirds in each instance shall include two-thirds of the outstanding preferred stock of such company), the undersigned in their discretion may withdraw the offer herein made to depositors of shares of any such company of whose capital stock two-thirds shall not have been deposited; and, in such case, no act or notice of withdrawal shall be required other than advertisement thereof at least once in each of two daily newspapers in the city of New York. Upon any such withdrawal,

the deposited shares of such company shall be returned without charge, upon surrender of the respective receipts issued therefor. The undersigned, in their discretion, may consummate the proposed transaction as to the stocks of any companies herein named, irrespective of the deposit of the stocks of any other company or of any withdrawal as to any other company.

4. The undersigned are authorized to proceed with the proposed transaction whenever in their sole judgment a sufficient amount of the stocks of said companies, or of any of them, shall have been deposited. They reserve the right, at any time, in their discretion, to wholly abandon the transaction and to withdraw their offer herein contained, as to all the depositors, by publication of notice of such withdrawal in two daily newspapers in the city of New York; and in that event all the deposited shares shall be returned without charge upon surrender of the respective receipts therefor. In case of any such withdrawal of the offer hereunder as to all or to any depositors, such depositors shall have no claim against the undersigned, and shall only be entitled to receive their deposited securities upon surrender of the respective receipts therefor.

5. The authorized issue of capital stock of the United States Steel Corporation presently provided for in said contract is $850,000,000, of which one-half is to be seven per cent cumulative preferred stock and one-half is to be common stock. The company will also issue its five per cent gold bonds to an aggregate amount not exceeding $304,000,000. In case less than all of the bonds and stock of the Carnegie Company or less than all of the stocks of the other companies above referred to shall be acquired, the amounts of bonds and stocks to be issued will be reduced as provided in said contract.

The forms of the new bonds and of the indenture securing the same, and of the certificates for the new preferred and common shares, and the entire plan of organization and management of the United States Steel Corporation, shall be determined by J. P. Morgan & Co. Every depositor shall accept in full payment and exchange for his deposited stock the shares of the capital stock of the United States Steel Corporation, to be delivered at the rates above specified, in respect of the stock by him so deposited; and no depositor or holder of any receipt issued hereunder shall have any interest in the disposition of any other of the shares of stock, or of the bonds of the United States Steel Corporation, by it to be issued and delivered to or for account of the Syndicate or of any proceeds thereof. All shares of the United States Steel Corporation deliverable to or for account of the Syndicate, which shall not be required for the acquisition of the stock of the Carnegie Company or for delivery to depositors under the terms of this circular, are to be retained by and belong to the Syndicate.

6. The respective depositaries may make all such rules as shall be approved by the undersigned, governing the transfer and registration of receipts for deposited shares, and for the closing of the transfer books for such receipts for any purpose. The undersigned shall not be responsible for any default of any depositary.

7. Each deposit hereunder shall be irrevocable, and shall operate as a separate and independent agreement, and as a transfer of the interest of the depositors to the undersigned on the terms hereof.

8. Deposits must be made with the following depositaries respectively:

Federal Steel preferred stock " " common stock	with	Colonial Trust Co., N. Y., or with Old Colony Trust Co., Boston.
National Tube preferred stock " " common stock	"	Morton Trust Co., N. Y., or with Kidder, Peabody & Co., Boston.
American Steel & Wire preferred stock	"	Standard Trust Co., N. Y.
" " " common stock	"	Guaranty Trust Co., N. Y.
National Steel preferred stock " " common stock	"	Central Trust Co., N. Y.
American Tin Plate preferred stock " " " common stock	"	Mercantile Trust Co., N. Y.
American Sheet Steel preferred stock " " " common stock	"	Farmers' Loan & Trust Co., N. Y.
American Steel Hoop preferred stock " " " common stock	"	N. Y. Security & Trust Co., N. Y.

Deposits must be made on or before the 20th day of March, 1901. After that date no deposit will be received except in the discretion of the undersigned, and on such terms as the undersigned may prescribe.

The undersigned reserve the right in their discretion to TERMINATE THE PRIVILEGE OF DEPOSIT hereunder at an earlier date upon two days' notice to be given by publication at least once in two daily newspapers in New York City.

It is proper to state that J. P. Morgan & Co. are to receive no compensation for their services as syndicate managers beyond a share in any sum which ultimately may be realized by the Syndicate.

J. P. Morgan & Co.,
Syndicate Managers.

Exhibit 5.

SYNDICATE AGREEMENT OF MARCH 12, 1902, BETWEEN J. P. MORGAN & CO. AND SYNDICATE SUBSCRIBERS, RELATIVE TO CONVERSION OF A PORTION OF THE PREFERRED STOCK OF THE UNITED STATES STEEL CORPORATION INTO BONDS.

An agreement, made the twelfth day of March, 1902, by and between J. P. Morgan & Co., co-partners as bankers, of the city of New York, parties of the first part; and the subscribers hereto (hereinafter called severally the "Subscribers," and collectively the "Syndicate"), severally parties of the second part:

Whereas, the United States Steel Corporation (hereinafter called the "Steel Company") proposes to make with J. P. Morgan & Co. a certain contract or contracts whereunder in behalf and account of the Steel Company, they are to offer to all of the preferred stockholders of the Steel Company, severally and ratably, the preferential opportunity of subscribing for, and of taking at par the "ten-sixty year" five per cent sinking fund gold bonds of the Steel Company, in even amounts approximately equal to forty per cent of their several holdings of preferred stock, such subscriptions to be payable in such preferred stock at par, provided that every such subscribing stockholder at the time of such original subscription payable in preferred stock shall have the right at his option then to make an additional subscription payable in cash for such bonds to an amount equal to twenty-five per cent of his stock subscription; such bonds to be authorized now for the principal sum of $250,000,000; and,

Whereas, in and by such contracts J. P. Morgan & Co. are to guaranty to the Steel Company that subscriptions for such bonds will be made for the aggregate sum of at least $100,000,000, payable in preferred stock to the extent of four-fifths of said sum, and in cash for the remaining one-fifth thereof; such contracts to provide for the payment or allowance to J. P. Morgan & Co. of a commission of four per cent upon the aggregate par amount of all such bonds, which shall be sold and delivered under their said offer, or to them, they having the prior right to take all of such bonds which shall be offered for subscription, and which shall not be taken by the preferred stockholders under such offer; and,

Whereas, upon the terms of this agreement, and for the purposes above mentioned, all of the parties hereto now desire to form a syndicate, to provide and to furnish to J. P. Morgan & Co., for delivery to the Steel Company the preferred stock, and the cash required under their said guaranty; and to receive from J. P. Morgan & Co. four-fifths of the net commissions by them received under the said contract or contracts with the Steel Company, which contracts J. P. Morgan & Co. are authorized from time to time to make, modify and perform, as in the exercise of their unlimited discretion from time to time they shall deem expedient; now,

Therefore, in consideration of the premises, and of the mutual promises herein contained, J. P. Morgan & Co. and the syndicate mutually have agreed, and do agree, as follows, viz:

First. On signing this agreement, each subscriber has delivered to J. P. Morgan & Co. certificates for preferred stock of the Steel Company in the amount indicated in his stock subscription hereto, which preferred stock, to such extent as may be required to meet the requirements of their said guaranty, is to be delivered to the Steel Company at par in exchange for the ten-sixty year five per cent gold bonds of the Steel Company for an equal amount at par, to be received therefor by such subscriber, and any such preferred stock not so delivered to the Steel Company is to be returned to the subscribers ratably according to their several subscriptions.

Second. Each subscriber further agrees to pay to J. P. Morgan & Co., in cash the sum specified in his cash subscription hereto, for which cash J. P. Morgan & Co. shall receive from the Steel Company bonds as aforesaid at par equal to the amount of such cash payment by such subscriber.

Third. The several deliveries and undertakings of the several subscribers under this agreement shall be made and performed by the subscribers, respectively, when and as requested by J. P. Morgan & Co., and without reference to the receipt or the possession by J. P. Morgan & Co., or by the subscribers, of any of said five per cent sinking fund gold bonds of the Steel Company.

Fourth. The several subscribers shall be called upon to make payments of cash in respect of their several subscriptions only ratably according to the several amounts thereof; but each subscriber shall be so responsible to the full extent of his several undertaking regardless of performance or non-performance by any other subscriber. In the same proportion, except as otherwise above provided, each subscriber shall be entitled to share in the benefits, and shall bear any loss, resulting to the syndicate under this agreement. Nothing herein contained shall constitute the parties hereto partners, or shall render any one of the subscribers liable to contribute more than his several proportionate amount as herein provided.

Fifth. In case of the failure of any subscriber to perform any of his undertakings hereunder as and when called for by them, J. P. Morgan & Co., in behalf of themselves and the syndicate, shall have, and at their sole and exclusive option they may exercise, the right to exclude such subscriber from all interest in the syndicate; and in their discretion, without any proceedings either at law or in equity, they may dispose of such subscriber's participation hereunder or of any interest or right of such subscriber hereunder or under any of said proposed contracts; but nevertheless such subscriber in default shall be responsible to J. P. Morgan & Co., for the benefit of themselves and the other subscribers hereto, for all damages caused by any failure on his part. At any public sale under this article of any interest or right of any subscriber, J. P. Morgan & Co., or any party thereto, may become purchaser for their, or for his own, benefit, without accountability; but notwithstanding any sale, whether public or private, the defaulting subscriber shall be responsible to J. P. Morgan & Co. and to the syndicate for all damage caused by any such failure on his part.

Sixth. J. P. Morgan & Co. shall have full power, in their discretion, from time to time, to agree with the Steel Company upon the terms and provisions of any contracts such as are above referred to; and, also, from time to time, to enter into any agreements with the Steel Company modifying the said contracts as they may deem expedient. They may deliver to the Steel Company a copy of this agreement, having annexed thereto a list of the subscribers; and thereupon to the extent of their several subscriptions, the subscribers, severally and respectively, but not jointly, and no one for any other, shall become responsible for the performance of such contracts with the Steel Company in discharge of the obligation thereunder of J. P. Morgan & Co. Any and all contracts with the Steel Company made by J. P. Morgan & Co. shall be open to inspection by any subscriber at the office of J. P. Morgan & Co.

Seventh. J. P. Morgan & Co. shall be the sole and final judges as to whether at any time it is to the interest of the syndicate to proceed further under this agreement or under said proposed contracts; and, whenever they may deem expedient, they may abandon the objects contemplated in this agreement and said proposed contracts and all further proceedings thereunder. In such event all the cash or stock and bonds by them received and then held for account of the syndicate, and the proceeds of such stock and bonds shall remain charged with the payment of all expenses and liabilities by them incurred hereunder and shall be applied:

First, to the payment of any and all expenses and obligations incurred by J. P. Morgan & Co. under any provision of this agreement;

Secondly, in repayment to the subscribers (so far as the same may be sufficient for that purpose) of all amounts of preferred stock or of cash by them respectively delivered hereunder to J. P. Morgan & Co.; such repayment to be made to the subscribers ratably.

Eighth. J. P. Morgan & Co. shall be sole managers of the syndicate, and in behalf of the syndicate they may make any and all arrangements, and may perform any and all acts, even though not herein provided for, in their opinion necessary or expedient to carry out the purposes of this agreement, or to promote or to protect what they deem to be the best interests of the syndicate.

The enumeration of specific powers in this or in any other article of this agreement shall not be construed as in any way abridging the general powers by this article intended to be conferred upon or reserved to J. P. Morgan & Co.

Ninth. From time to time before October 1, 1903, J. P. Morgan & Co., in behalf of the syndicate, may make sales of all or any part of the bonds received by them for account of the syndicate. Any such sales may be made by J. P. Morgan & Co. either publicly or privately, by themselves, or in such manner as they may deem proper, and shall be upon such terms and for such price or prices as they may deem expedient. Each subscriber hereby assents, to, and agrees to be bound by, any such action.

No subscriber shall be entitled to receive any of said bonds before October 1, 1903. In the meantime, in their discretion, J. P. Morgan & Co., either themselves may retain all or any of such bonds, or they may deliver to any subscriber his proportionate part thereof, upon his agreement to hold the same subject to sale by J. P. Morgan & Co. and to return the same upon call of J. P. Morgan & Co., at any time before October 1, 1903.

Should any subscriber desire to withdraw from sale the portion of bonds to which he may be entitled hereunder, J. P. Morgan & Co. in their discretion may deliver to any subscriber his portion of such bonds, upon his agreement to hold the same for himself without sale until October 1, 1903, or until the complete sale by J. P. Morgan & Co. at an earlier date of all bonds held by or for the syndicate.

Tenth. Until October 1, 1903, or until the final distribution hereunder, J. P. Morgan & Co., in such manner, at such prices, on such terms, and in such amounts, as they may deem expedient, shall have power, for account of the syndicate, to make purchases of the five per cent gold bonds and of the preferred stock of the Steel Company, and they may resell any such bonds and stocks which they may have purchased; and, in their discretion, they may make any further undertakings of any kind with any persons concerning any such bonds and stocks. They may apply towards any such purchases any sums realized from any sales of bonds and stocks of the Steel Company under any provision of this agreement; and they may make advances, or may procure loans, and may secure the same to such amounts and in such manner as from time to time they may deem expedient for any of the purposes of this agreement.

Eleventh. J. P. Morgan & Co. shall issue to the subscribers suitable receipts in respect of payments made hereunder, and they may issue to the respective subscribers certificates of interest of such tenor and form as they may deem suitable. Such certificates of interest and all rights and obligations hereunder of the respective subscribers may be made transferable in such manner and on such terms and conditions as J. P. Morgan & Co. may prescribe.

Twelfth. J. P. Morgan & Co. shall have authority, from time to time and at any time, to incur such expenses as they may deem proper in carrying out, or in endeavoring to carry out, this agreement or said proposed contracts, or in doing any act or thing which they may deem to be in the interest of the syndicate, and all such expenses shall constitute and be a prior charge in their favor upon any and all moneys, stocks and bonds by them received or held hereunder. Any and all moneys by them received hereunder shall be held by them as bankers in general account. They also shall have power and authority, in their sole and absolute discretion, finally to fix and to pay all compensations of depositaries, brokers, agents and counsel, or others, and in the expense account may be included brokers' commission as usually paid.

Thirteenth. After the complete performance of the entire obligation of the syndicate hereunder, but not before the first day of October, 1903, unless otherwise determined by J. P. Morgan & Co. in the exercise of their unrestricted discretion, the syndicate shall be entitled to receive four-fifths portion of the net commissions received by J. P. Morgan & Co., or such part thereof as may not have been used by J. P. Morgan & Co. for the purposes of this agreement, out of any moneys for such purpose received or retained by J. P. Morgan & Co., after payment of all expenses and obligations incurred hereunder by J. P. Morgan & Co.

Fourteenth. J. P. Morgan & Co. shall not be liable under any of the provisions of this agreement nor for any matter therewith connected, except for good faith in performing, or in refraining from performing or carrying out, the obligations by them herein expressly assumed; the implication of any obligation not herein expressly assumed by them being hereby expressly denied and waived.

It is understood that, in the same manner as other subscribers, J. P. Morgan & Co.' may become subscribers hereto; that as such subscribers they shall be liable for all subscriptions by them made, and that in all respects they shall be entitled to the same rights and benefits as any other subscriber. Any subscriber hereto may, on his own account, make any agreement with any other subscriber or with the Steel Company.

Fifteenth. This agreement shall bind, and is for the benefit of, the parties hereto, and their executors and administrators severally and respectively; but no assignment hereunder shall be valid unless assented to in writing by J. P. Morgan & Co.

All rights and powers of J. P. Morgan & Co. hereunder shall vest in said copartnership firm, as from time to time constituted, without further act or assignment.

Sixteenth. Nothing herein contained shall be construed as creating any trust or obligation whatsoever in favor of any person or corporation other than the subscribers, nor any obligation in favor of the subscribers, excepting only as herein is expressly provided.

Seventeenth. Each subscriber shall set opposite his subscription hereunder an address, to which notices, calls or other communications may be sent, and any notice, call or other communication addressed to any subscriber at the address so given, and either left at such address or mailed, shall be deemed actually given to such subscriber, and shall be sufficient for all the purposes hereof. If any subscriber shall fail so to furnish his address to J. P. Morgan & Co., he shall not be entitled to any notice of calls, or offers, or any other notice hereunder, and he shall be deemed to assent to any action of J. P. Morgan & Co.

Eighteenth. In consideration of the irrevocable rights in them vested hereunder, and the promises of the several subscribers, J. P.

Morgan & Co. have become parties to, and in good faith will endeavor to consummate the purposes of this agreement; and, after receipt thereof from the Steel Company, they will, as herein provided, deliver to the syndicate the said five per cent gold bonds or the proceeds thereof, and the said cash compensation.

In witness whereof, the parties of the first part have hereunto affixed their signatures, and the parties of the second part at various dates have affixed their subscriptions hereto, it being understood that for convenience this agreement may be subscribed in several parts and copies with like force and effect as if all the subscriptions were upon one part or copy thereof.

Name.	Address.	Subscription for 5 per cent gold bonds.	
		Preferred stock.	Cash.

Exhibit 6.

PRO FORMA CONSOLIDATED GENERAL BALANCE SHEET, UNITED STATES STEEL CORPORATION AND SUBSIDIARY COMPANIES, APRIL 1, 1901, IN COMPARISON WITH SIMILAR BALANCE SHEET AT DECEMBER 31, 1910.

ASSETS.

	Apr. 1, 1901.	Dec. 31, 1910.	Increases.[1]
Property account:			
Cost of property of all companies at dates acquired by United States Steel Corporation Apr. 1, 1901, in case of 11 subsidiary companies, and Aug. 1, 1901, in case of Shelby Steel Tube Co	$1,297,400,000.02	$1,297,400,000.02	
Sundry adjustments applying against preceding year's balances of property account		3,063,594.00	$3,063,594.00
Expended for additional property and construction since Apr. 1, 1901		339,348,676.71	339,348,676.71
Additions to property investment account, through purchase of—			
Union Steel properties		30,280,632.07	30,280,632.07
Clairton Steel properties		10,759,560.42	10,759,560.42
Tennessee Coal, Iron and Railroad properties		48,961,208.83	48,961,208.83
	1,297,400,000.02	1,729,813,672.05	432,413,672.03
Less, charged off as follows—			
To sinking and depreciation funds		39,706,567.88	39,706,567.88
To extraordinary replacement funds		1,632,011.99	1,632,011.99
To undivided surplus		163,694,423.16	163,694,423.16
		205,033,003.03	205,033,003.03
Balance of property account, subject to offsetting balance to credit of depreciation and replacement funds, see contra.	1,297,400,000.02	1,524,780,669.02	227,380,669.00
Balance of investment in mine stripping and development, etc.	1,417,984.33	23,103,712.21	21,685,727.88
Total property investment account, subject to depreciation reserves as above stated	1,298,817,984.35	1,547,884,381.23	249,066,396.88

PRO FORMA CONSOLIDATED GENERAL BALANCE SHEET, UNITED STATES STEEL CORPORATION AND SUBSIDIARY COMPANIES, APRIL 1, 1901, IN COMPARISON WITH SIMILAR BALANCE SHEET AT DECEMBER 31, 1910—Continued.

ASSETS—Continued.

	Apr. 1, 1901.	Dec. 31, 1910.	Increase.[1]
Deferred charges to operations:			
Advanced mining royalties, exploration expenses and miscellaneous charges	$2,088,027.09	$15,331,704.91	$13,243,677.82
Less fund reserved from surplus to cover possible failure to realize mining royalties		7,000,000.00	7,000,000.00
	2,088,027.09	8,331,704.91	6,243,677.82
Investments:			
Outside real estate and investments in sundry securities, including real estate mortgages, and land sales contracts	241,030.19	2,369,394.04	2,128,363.85
Sinking and reserve fund assets:			
Cash resources held by trustees of bond sinking funds	238.99	856,519.00	856,280.01
Contingent fund and miscellaneous assets		3,295,464.79	3,295,464.79
Insurance and depreciation funds' assets (net)		11,915,921.45	11,915,921.45
	238.99.	16,067,905.24	16,067,666.25
Current assets:			
Inventories	71,852,438.59	176,537,823.71	104,685,385.12
Accounts receivable	50,910,860.78	44,603,273.53	*5,610,753.49*
Agents' balances		696,833.76	
Bills receivable	3,280,190.41	5,540,180.77	2,259,990.36
Sundry marketable bonds and stocks	10,168,823.84	4,410,793.61	*5,758,030.23*
Cash	56,153,066.01	56,953,514.16	800,448.15
	192,365,379.63	288,742,419.54	96,377,039.91
Grand total	1,493,512,660.25	1,863,395,804.96	369,883,144.71

LIABILITIES.

	Apr. 1, 1901.	Dec. 31, 1910.	Increase.[1]
Capital stock of United States Steel Corporation:			
Common	$508,227,393.70	$508,302,500.00	$75,106.30
Preferred	510,205,743.40	360,281,100.00	*149,924,643.40*
	1,018,433,137.10	868,583,600.00	*149,849,537.10*
Capital stock of subsidiary companies not owned by United States Steel Corporation	535,407.00	620,352.50	84,945.50
Bonded and debenture debt (not including bonds held by sinking-fund trustees):			
United States Steel Corporation 50-year bonds	303,450,000.00	274,412,000.00	*29,038,000.00*
United States Steel Corporation 10-60-year bonds		190,777,500.00	190,777,500.00
Subsidiary companies' bonds	59,091,657.42	131,162,366.70	72,070,709.28
	362,541,657.42	596,351,866.70	233,810,209.28
Mortgages and purchase-money obligations:			
Mortgages (sundry real estate)	4,109,400.41	784,792.38	*3,324,608.03*
Purchase-money obligations	17,762,622.19	2,313,000.00	*15,449,622.19*
	21,872,022.60	3,097,792.38	*18,774,230.22*
Current liabilities:			
Current accounts payable and pay rolls	27,466,679.68	23,695.264.04	3,018,411.52
Accrued taxes, not yet due		6,789,827.16	
Bills and loans payable	17,134,803.02	813,500.00	*16,321,303.02*
Special deposits on loans due employees and others	7,622,490.23	886,122.16	*6,736,368.07*
Accrued interest and unpresented coupons	3,064,929.23	7,991,373.15	4,926,443.92
Unpaid accrued dividends of subsidiary companies	2,852,388.30		*2,852,388.30*
United States Steel Corporation dividends declared, not yet due		12,658,700.50	12,658,700.50
	58,141,290.46	52,834,787.01	*5,306,503.45*
Total capital and current liabilities	1,461,523,514.58	1,521,488,398.59	59,964,884.01

PRO FORMA CONSOLIDATED GENERAL BALANCE SHEET, UNITED STATES STEEL CORPORATION AND SUBSIDIARY COMPANIES, APRIL 1, 1901, IN COMPARISON WITH SIMILAR BALANCE SHEET AT DECEMBER 31, 1910—Continued.

LIABILITIES—Continued.

	Apr. 1, 1901.	Dec. 31, 1910.	Increase.[1]
Sundry reserve funds:			
Contingent and miscellaneous operating funds	$2,428,084.62	$11,689,728.70	$9,261,644.08
Insurance funds	450,882.42	8,402,999.21	7,952,116.79
	2,878,967.04	20,092,727.91	17,213,760.87
Bond sinking, depreciation and replacement funds (represents a balance of reserves made from earnings and income to cover accruing amortization and depreciation in respect of assets covered in property-investment account)	4,110,178.63	[2] 117,671,520.47	113,561,341.84
Appropriated surplus to cover capital expenditures		40,000,000.00	40,000,000.00
Undivided surplus of United States Steel Corporation and subsidiary companies:			
Capital surplus provided in organization	25,000,000.00	25,000,000.00	
Balance of surplus accumulated by all companies since Apr. 1, 1901, viz—			
Total exclusive of I. C. P. in inventories		105,438,718.67	105,438,718.67
Inter-company profit in inventories		33,704,439.32	33,704,439.32
	25,000,000.00	164,143,157.99	139,143,157.99
Grand total	1,493,512,660.25	1,863,395,804.96	369,883,144.71

[1] Decreases in italics.

[2] In the balance sheet of December 31, 1910, as published in the annual report of the Corporation, this amount has been written off the property account, which reduces the totals of the asset and liability sides of the balance sheet a corresponding amount.

EXHIBIT 7.

ISSUED CAPITAL STOCK OF THE CONSTITUENT COMPANIES OF THE UNITED STATES STEEL CORPORATION, AMOUNT OWNED BY THE SAID CORPORATION, THE ISSUED CAPITAL STOCK OF THE SUBSIDIARIES OF SAID CONSTITUENT COMPANIES AND PERCENTAGE THEREOF OWNED BY THE LATTER, JULY 1, 1911.

NOTE.—The following schedule does not show all the properties of the Steel Corporation, but instead shows, first, the *constituent* companies whose stocks are directly owned by the Steel Corporation; and, second, the subsidiary companies of these constituent concerns with, in some instances, the subsidiaries of such subsidiaries.

Most of the constituent companies own property in fee as well as own stocks in other companies. Thus, the Carnegie Steel Company of New Jersey owns in fee all the property previously owned by the National Steel Company and the American Steel Hoop Company, while, as indicated below, a large part of the property of some of the other concerns is held in fee. The Federal Steel Company, however, is exclusively a holding concern.

The indebtedness of the various companies is not shown in this table. A large amount of such indebtedness is owned within the organization, and therefore is of no special interest.

UNITED STATES STEEL CORPORATION (NEW JERSEY).

Capital stock outstanding: Common, $508,302,500; preferred, $360,281,100.

The "constituent" companies whose capital stocks are directly owned by the United States Steel Corporation, together with the capital stocks of those companies, on the above date were as follows:[1]

	Total capital stock issued and outstanding.	Amount not owned by U. S. Steel Corp'n.	Amount owned by U. S. Steel Corp'n.
Carnegie Steel Co.	$65,250,000.00	....	$65,250,000.00
Federal Steel Co.:			
Common	46,484,300.00	....	46,484,300.00
Preferred	53,260,900.00	....	53,260,900.00
American Steel & Wire Co.:			
Common	50,000,000.00	$10,600.00	49,989,400.00
Preferred	40,000,000.00	1,000.00	39,999,000.00
National Tube Co.:			
Common	40,000,000.00	....	40,000,000.00
Preferred	40,000,000.00	....	40,000,000.00
American Sheet & Tin Plate Co.:			
Common	24,500,000.00	400.00	24,499,600.00
Preferred	24,500,000.00	400.00	24,499,600.00
American Bridge Co.	10,000,000.00	....	10,000,000.00
Shelby Steel Tube Co.:			
Common	8,151,500.00	....	8,151,500.00
Preferred	5,000,000.00	....	5,000,000.00
Lake Superior Consolidated Iron Mines	29,887,448.97	....	29,887,448.97
Union Steel Co.	20,000,000.00	....	20,000,000.00
Clairton Steel Co.	3,500,000.00	....	3,500,000.00
Tennessee Coal, Iron & R. R. Co.:			
Common	32,529,997.50	87,202.50	32,442,795.00
Preferred	124,500.00	124,500.00	....
Guaranteed preferred	178,600.00	178,600.00	....

CARNEGIE STEEL COMPANY (NEW JERSEY).

Capital stock, $65,250,000. All owned by United States Steel Corporation.

In addition to the amount of capital stock as above, the Carnegie Steel Company has a capital surplus account of $189,000,000 arising as follows: In 1903 a consolidation or merger was made of the Carnegie Company, National Steel Company, and American Steel Hoop Company. The aggregate amount of capital stocks of these three companies before the merger was $252,000,000. The stock of the merged or consolidated company was fixed at 25 per cent of the total of the old companies' stocks, or $63,000,000 (since increased to $65,250,000), thus giving to the consolidated company a capital surplus of $189,000,000.

The Carnegie Steel Company of New Jersey, aside from owning in fee all the manufacturing properties formerly owned by the National Steel Company and the American Steel Hoop Company, also controls the following companies through ownership of their capital stocks, the total capital stock of said companies being as stated below:

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[1] See note 1, page 414.

Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.
3. Carnegie Steel Co. (Pa.)	$50,000,000	100
3. Carnegie Natural Gas Co.	300,000	100
3. Union R. R. Co.	2,000,000	100
3. Slackwater Connecting R. R. Co.	10,000	100
3. Etna & Montrose R. R. Co.	60,000	100
4. Sharon Connecting R. R. Co.	10,000	100
3. Pittsburg & Conneaut Dock Co.	100,000	100
3. Youghiogheny Northern R. R. Co.	400,000	100
3. Mt. Pleasant Water Co.	150,000	100
3. Trotter Water Co.	850,000	100
3. Union Supply Co.	500,000	100
3. Bessemer & Lake Erie R. R. Co.	500,000	100
2. Pittsburg, Bessemer & Lake Erie R. R. Co.:		
Common	10,000,000	55
Preferred	2,000,000	38
3. Carnegie Land Co.	10,000	100
3. Conneaut Land Co.	10,000	100
3. Conneaut & Eastern R. R. Co.	1,000	100
2, 5. Pennsylvania & Lake Erie Dock Co.	675,000	52
2. Columbus Stone Co.	60,000	100
2. Mahoning Limestone Co.	50,000	51
3. Isabella Limestone Co.	3,000	67
3. Pittsburg Limestone Co. (Ltd.)	60,000	75
3. Peoples Supply Co. (Ltd.)	10,008	75
4. Bessemer Electric Power Co.	5,000	100
3. Mingo Coal Co.	1,000	100
3. National Mining Co.	500,000	66⅔
2. Pewabic Co.	200,000	50
2, 6. H. C. Frick Coke Co.	20,000,000	74+
1, 3. Pittsburgh S. S. Co.	7,880,000	97+
3. Oliver Iron Mining Co.	1,200,000	100
Subsidiary companies of foregoing.		
Of Union R. R. Co.:		
3. Monongahela Southern R. R. Co.	160,000	100
Subsidiary companies of foregoing—Continued.		
Of H. C. Frick Coke Co.:		
3. Standard Water Co.	$10,000	100
4. Sewickley Water Co.	50,000	100
2. Hostetter-Connellsville Coke Co.	1,500,000	87
Of Oliver Iron Mining Co.:		
2. Lake Superior Iron Co.	2,100,000	75
2. Regent Iron Co.	450,000	75
2. Security Land & Exploration Co.	100,000	100
4. Braddock Iron Mining Co.	30,700	100
4. Homestead Iron Mining Co.	30,000	100
4. Duquesne Iron Mining Co.	22,100	100
4. Allegheny Iron Mining Co.	22,900	100
4. Hope Iron Mining Co.	36,200	100
4. Neville Iron Mining Co.	50,000	100
4. Monongahela Iron Mining Co.	5,700	100
4. Lorain Iron Mining Co.	50,000	100
4. Agawam Iron Mining Co.	17,400	100
4. Great Western Mining Co.	6,000,000	100
4. Ambridge Iron Mining Co.	50,000	100
4. Morewood Iron Mining Co.	50,000	100
4. Pencoyd Iron Mining Co.	48,300	100
4. Munhall Iron Mining Co.	50,000	100
4. Monessen Iron Mining Co.	50,000	100
4. Somerset Iron Mining Co.	50,000	100

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[1] The numbers refer to notes at the end of this exhibit (p. 414).

FEDERAL STEEL COMPANY (NEW JERSEY).

Capital stock: Common, $46,484,300; preferred, $53,260,900. Entire amount is owned by United States Steel Corporation.

The Federal Steel Company owns no property in fee. It controls the following companies through ownership of their capital stocks. The total capital stocks of said companies are as stated below.

Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.
2. Minnesota Iron Co.	$16,500,000	100
2. Illinois Steel Co.	18,650,600	100
2, 7. Elgin, Joliet & Eastern Ry. Co.	10,000,000	60
2. The National Tube Co. (of Ohio):		
Common	6,000,000	100
Preferred	3,000,000	100
3. The Lorain Steel Co.	3,000,000	100
3. The Lake Terminal R. R. Co.	2,000,000	100
3. Johnstown & Stony Creek R. R. Co.	91,500	100
3. Ingleside Coal Co. (Ltd.)	14,000	100
4. Indiana Steel Co.	20,000,000	100
4. Gary Land Co.	10,000	100
4. Connellsville & Monongahela Ry. Co.	700,000	100
2. H. C. Frick Coke Co. (for capitalization see Carnegie Steel Co.)	....	3+
4. Bunsen Coal Co.	10,000	100
4. U. S. Steel Products Co.	1,000,000	100
4. Minnesota Steel Co.	1,000,000	100
4. Interstate Transfer Ry. Co.	50,000	100
4. Spirit Lake Transfer Ry. Co.	65,000	100
4. Piloto Mining Co.	20,000	85
Subsidiary companies of foregoing.		
Of Minnesota Iron Co.:		
2. Chandler Iron Co.	80,000	51
2. Chapin Mining Co.	1,000,000	100
2. Winthrop Iron Co.	500,000	100
3. Alpha Ore Co.	500	100
3. Auburn Iron Co.	400,000	100
3. Beta Ore Co.	500	100
3. Bishop Iron Co.	57,000	100
3. Canton Iron Co.	50,000	100
3. Chippewa Iron Co.	27,000	100
3. Delaware Iron Co.	8,000	100
3. Elba Iron Co.	100,000	100
Subsidiary companies of foregoing—Continued.		
Of Minnesota Iron Co.—Continued.		
3. Fayal Iron Co.	$45,450	100
3. Genoa Iron Co.	9,000	100
3. Hugo Iron Co.	50,000	100
3. Manila Iron Co.	32,000	100
3. Norman Iron Co.	50,000	100
3. Northern Development Co.	100,000	100
3. Duluth & Iron Range R. R. Co.	3,000,000	100
Of Illinois Steel Co.:		
4. Universal Portland Cement Co.	1,000,000	100
4. United States Coal & Coke Co.	2,000,000	100
2. H. C. Frick Coke Co. (for capitalization see Carnegie Steel Co.)	....	10+
4. United Supply Co.	100,000	100
3. Cundy Iron Co.	50,000	100
4. Illinois Steel Warehouse Co.	100,000	100
3. Chicago, Lake Shore & Eastern Ry. Co.	9,000,000	100
3. Joliet & Blue Island Ry. Co.	100,000	100
3. Chicago & So. Eastern Ry. Co.	100,000	100
3. Chicago & Kenosha Ry. Co.	100,000	100
3. Milwaukee, Bay View & Chicago R. R. Co.	100,000	100
Of Gary Land Co.:		
4. Gary Heat, Light & Water Co.	100,000	100
Of U. S. Steel Products Co.:		
4. Isthmian S. S. Co.	£25,003	100

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[1] The numbers refer to notes at the end of this exhibit (p. 414).

AMERICAN STEEL AND WIRE COMPANY OF NEW JERSEY.

Capital stock: Common, $50,000,000; preferred, $40,000,000. All but 106 shares common and 10 shares preferred is owned by the United States Steel Corporation.

A very large part of the property of the American Steel and Wire Company is owned in fee. The company also controls the following subsidiaries:

Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.	Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.
4. American Steel & Wire Co. (of Alabama)	$100,000	100	3. Newburg & South Shore Ry. Co.	$1,500,000	100
3. American Steel & Wire Co. (of Colorado)	25,000	100	3. Waukegan & Mississippi Valley Ry. Co.	22,000	100
2. Trenton Iron Co.	600,000	100	2. H. C. Frick Coke Co. (for capitalization see Carnegie Steel Co.)		11
3. Canadian Steel & Wire Co.	30,000	100	4. United Coal Co. (for capitalization see A. S. & T. P. Co.)		25
2. Griswold Wire Co.	75,000	100	2. Pennsylvania & Lake Erie Dock Co. (for capitalization see Carnegie Steel Co.)		18
2. Troy Steel Products Co.	900,000	100			
3. American Mining Co.	1,000,000	100			
3. American Land Co.	200,000	100			
2. Edgar Zinc Co.	1,000,000	80			
3. Pittsburgh & Ohio Valley Ry. Co.	60,000	100			
3. Northern Liberties Ry. Co.	5,000	100			

[1] The numbers refer to notes at the end of this exhibit (p. 414).

NATIONAL TUBE COMPANY (NEW JERSEY).

Capital stock: Common, $40,000,000; preferred, $40,000,000. Entire amount is owned by United States Steel Corporation.

The greater part of the property of the National Tube Company is owned in fee. The company also owns the following stocks of subsidiary companies:

Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.	Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.
2. National Tube Works Co.	$100,000	100	2. Pennsylvania & Lake Erie Dock Co. (for capitalization see Carnegie Steel Co.)		7+
3. Benwood & Wheeling Connecting Ry. Co.	50,000	100			
3. McKeesport Connecting R. R. Co.	1,000,000	100			
2. H. C. Frick Coke Co. (for capitalization see Carnegie Steel Co.)		1			

[1] The numbers refer to notes at the end of this exhibit (p. 414).

AMERICAN SHEET AND TIN PLATE COMPANY (NEW JERSEY).

Capital stock: Common, $24,500,000; preferred, $24,500,000. All but 4 shares of each class of stock is owned by United States Steel Corporation.

In addition to the amount of capital stock as above, the American Sheet and Tin Plate Company has a capital surplus account of $46,325,000 arising from the merger of the American Tin Plate Company and the American Sheet Steel Company. In that merger the stock of the consolidated company remained the same as the stock of the American Sheet Steel Company previously was, thus resulting in the company having a capital surplus equal to the stock of the American Tin Plate Company in lieu of which no new stock was issued.

Nearly all of the property of the company is owned in fee. The subsidiary concerns are as follows:

Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.	Subsidiaries.[1]	Amount of capital stock.	Percent owned by parent company.
2. W. Dewees Wood Co	$1,500,000	100	3. Apollo Gas Co	$100,000	100
Versailles Fuel Gas Co.	100,000	100	4, 8. United Coal Co	60,000	75
McKeesport Terminal R. R. Co	12,000	100	3, 9. National Mining Co		33⅓
3. Elwood, Anderson & Lapelle R. R. Co	50,000	100	2, 10. Sharon Tin Plate Co		40⅓

[1] The numbers refer to notes at the end of this exhibit (p. 414).

AMERICAN BRIDGE COMPANY (NEW JERSEY).

Capital stock, $10,000,000. All owned by United States Steel Corporation.

In addition to the amount of capital stock as above, the American Bridge Company has a capital surplus account of $52,324,600 arising from reducing the par value of its capital stock from $62,324,600 to the nominal amount of $10,000,000.

The greater part of the property of the company is owned in fee. Its subsidiary companies are as follows:

Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.	Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.
4. American Bridge Co. (of New York)	$100,000	100	3. Pencoyd & Philadelphia R. R. Co	$5,000	100
4. Empire Bridge Co	3,000,000	100			
4. American Improvement Co	2,500	100			

[1] The numbers refer to notes at the end of this exhibit (p. 414).

LAKE SUPERIOR CONSOLIDATED IRON MINES (NEW JERSEY).

Capital stock, $29,887,448.97. All owned by United States Steel Corporation.

The subsidiary companies of the Lake Superior Consolidated Iron Mines, and their capital stocks, are as follows:

Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.	Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.
2. Duluth, Missabe & Northern Ry. Co.	$4,112,500.00	100	4. Cambridge Iron Mining Co	$50,000.00	100
4,11. Proctor Water & Light Co.	250,000.00	100	4. Clarion Iron Mining Co.	50,000.00	100
3. Adams Mining Co.	220,000.00	100	4. Crawford Iron Mining Co.	50,000.00	100
2. Spruce Mining Co.	66,000.00	100	4. Cumberland Iron Mining Co	50,000.00	100
2. Mountain Iron Co.	1,603,600.00	100	3. Essex Iron Co.	1,293,267.48	100
2. Great Northern Mining Co.	3,500,000.00	99+	3. Roucheleau - Ray Mining Co.	95,000.00	100
2. Shaw Iron Co.	2,970,900.00	99+	3. Tubal Iron Mining Co.	50,000.00	100
2. Rathbun Iron Mining Co.	100,000.00	100	3. Owasco Iron Co.	50,000.00	100
4. Greenville Iron Mining Co.	50,000.00	100	3. Oneida Iron Co.	50,000.00	100
2. Missabe & Northern Town Site Co.	6,900.00	100	3. Seneca Iron Co.	50,000.00	100

[1] The numbers refer to notes at the end of this exhibit (p. 414).

UNION STEEL COMPANY (PENNSYLVANIA).

Capital stock, $20,000,000. All owned by United States Steel Corporation.

The Union Steel Company owns a considerable amount of property in fee.

The subsidiary companies (which hold a large portion of the property) and their capital stocks are as follows:

Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.	Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.
3. Sharon Coke Co.	$2,510,000	100	3. Girard Land Co.	300,000	100
3,12. Republic-Connellsville Coke Co.	2,500,000	100	3. Sharon Land Co.	5,000	100
3. Sharon Ore Co	5,000,000	100	2. Sharon Tin Plate Co.	800,000	59½
3. Donora Mining Co.	6,000,000	100	3. Matthews Woven Wire Fence Co.	49,000	100
3. Mercer Valley R.R.Co.	275,000	100	3. Sharon Coal & Limestone Co.	300,000	66⅔
3. Donora Southern R.R. Co.	40,000	100			

[1] The numbers refer to notes at the end of this exhibit (p. 414).

CLAIRTON STEEL COMPANY (PENNSYLVANIA).

Capital stock, $3,500,000. All owned by United States Steel Corporation.

The greater part of the property of Clairton Steel Company is owned in fee. Its subsidiary companies and their capital stocks are as follows:

Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.	Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.
3. St. Clair Terminal R. R. Co.	$1,000,000	100	2. Champion Iron Co.	$498,750	100
3. Clairton Land Co.	1,000	100	3. St. Clair Limestone Co.	25,000	51

[1] The numbers refer to notes at the end of this exhibit below.

TENNESSEE COAL, IRON AND RAILROAD COMPANY (TENNESSEE).

Capital stock: Common, $32,529,997.50; preferred, $124,500; guaranteed preferred (Alabama Steel and Ship Building Company), $178,600. All of the common stock, except $87,202.50, is owned by the United States Steel Corporation, but none of the preferred or guaranteed preferred stock is owned by the United States Steel Corporation.

The great bulk of the property of the Tennessee Coal, Iron and Railroad Company is owned in fee; the company has, however, the following subsidiaries:

Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.	Subsidiaries.[1]	Amount of capital stock.	Per cent owned by parent company.
2. Birmingham Southern R. R. Co.	$1,200,000.00	100	3. Ensley Land Co.	$450,163.75	57+
3. Tennessee Land Co.	10,000.00	100	3. Potter Ore Co.	800,000.00	50

[1] The numbers refer to notes at the end of this exhibit below.

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[1] The United States Steel Corporation also owns $221,700 (par value) of the stock of the Pittsburgh Steamship Company, the balance of the stock being owned by the Carnegie Steel Company.

[2] Companies which were independent concerns prior to the time control or ownership thereof passed to the parent company now controlling or owning same.

[3] Companies which were promoted and organized in the interest of their respective parent companies, in the extension of the latter's business, prior to the date the United States Steel Corporation acquired control of the said parent companies.

[4] Companies which have been promoted and organized in the interest of their respective parent companies, in the extension of the latter's business, since the time the United States Steel Corporation acquired control of said parent companies.

[5] American Steel and Wire Company and National Tube Company also own stock of this company, giving an ownership by United States Steel interests of 77.9 per cent of total.

[6] The remaining 26 per cent of Frick Coke Company stock is owned by other companies controlled by the United States Steel Corporation, viz: National Tube Company, 1 per cent; American Steel and Wire Company, 11 + per cent; Illinois Steel Company, 10 + per cent; Federal Steel Company, 3 + per cent. Thus the entire stock of Frick Coke Company is owned by United States Steel interests. In addition to its outstanding stock of $20,000,000 the Frick company has a capital surplus of $4,871,231.30 arising from merger of companies.

[7] The remaining 40 per cent of this company's stock is owned by the Chicago, Lake Shore and Eastern Railway Company, a subsidiary of the Illinois Steel Company.

[8] Balance of stock owned by American Steel and Wire Company.

[9] See Carnegie Steel Company for particulars of stock, etc.

[10] See Union Steel Company for particulars of stock, etc.

[11] Authorized amount.

[12] This company has also a capital surplus of $2,000,000 arising from merger of companies.

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REPORT

OF THE

COMMISSIONER OF CORPORATIONS

ON

THE STEEL INDUSTRY

PART II
COST OF PRODUCTION
PRELIMINARY REPORT

JANUARY 22, 1912

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LETTERS OF TRANSMITTAL.

Department of Commerce and Labor,
Office of the Secretary,
Washington, January 22, 1912.

Sir: I have the honor to transmit herewith Part II of the Report of the Commissioner of Corporations on the Steel Industry, being in the nature of a preliminary report and dealing with the cost of production in the steel industry.

Respectfully,
Charles Nagel,
Secretary.

The President.

Department of Commerce and Labor,
Bureau of Corporations,
Washington, January 22, 1912.

Sir: I have the honor to transmit herewith Part II of a Report on the Steel Industry, made to the President under your direction and in accordance with the law creating the Bureau of Corporations. This is in the nature of a preliminary report, and deals with the cost of production in the steel industry.

I desire to mention as especially contributing, under my direction, to the preparation of this part the name of Mr. Francis Walker, one of my assistants.

Very respectfully,
Herbert Knox Smith,
Commissioner.

To Hon. Charles Nagel,
Secretary of Commerce and Labor.

LETTER OF SUBMITTAL.

Department of Commerce and Labor,
Bureau of Corporations,
Washington, January 22, 1912.

Sir: I have the honor to submit a report on the cost of production of iron and steel.

The cost of steel making is a basic industrial fact, which bears on tariff legislation, prices and profits in a great industry, and the concentrated control of a great natural resource.

The Bureau has used the actual records of companies covering, roughly, two-thirds of the country's production of iron and steel for 1902 to 1906. These data are most complete. More limited figures for 1902 to 1910 make it clear that these five-year figures substantially represent present conditions also.

The costs of the United States Steel Corporation for the chief materials and products are also given for 1910.

During 1902 to 1906 the steel industry was based on Lake ore, but very low costs for Southern pig iron appear in the report.

''BOOK COSTS'' AND ''INTERCOMPANY'' PROFITS.

Many of these companies were highly ''integrated;'' that is, they linked up under one control, through various subsidiaries, ore mines, blast furnaces, steel works, etc. Their ''cost sheets,'' however, did not correspond with this integration. The costs of each subsidiary were shown as though it were independent, and *included profits paid to other subsidiaries.* To illustrate, one subsidiary of a combination, operating blast furnaces, would pay to another subsidiary, which mined ore, a price for ore that included a profit to the ore company. This price would, however, be entered by the furnace company as a part of its costs. That is, they were ''book costs,'' and they included considerable profits really received by the same interests.

These intermediate profits are very important. For example, the average ''book cost'' of Bessemer pig iron over the five-year period was $13.89 per ton. ''Transfer'' profits were $1.79, leaving a net cost of $12.10. (Gross tons are used throughout, except where otherwise specified.)

The Bureau deducted these intermediate ''transfer'' profits for all the important simpler products. The resulting ''revised cost'' must, however, be handled with great caution. The margin between this revised cost and the selling price is, of course, much larger than the margin over the "book cost;" but, on the other hand, that larger margin must cover all the stages of production, and therefore a much larger investment. The profit above the "book cost" of a subsidiary is to be applied simply to the investment of that company. On the other hand, the profit above the revised cost of an integrated company, carrying through many stages of production, *must be set against that entire investment.*

The Bureau has presented the cost data, combined for a number of companies, in two forms for each product: (1) It gives first the average book cost thereof; (2) it has then deducted the average intermediate "transfer" profits, thus showing the revised cost.

One of these companies, the United States Steel Corporation (hereafter referred to as the Steel Corporation), has also large intercompany profits on transportation, chiefly in carrying its ore on its own railroads. In the Steel Corporation's costs, which are given later, these "transportation" profits are also deducted; but not here. Only the Steel Corporation has such profits to any considerable degree, and to deduct them in the present combined figures would give an average for all companies which would be true neither for the Steel Corporation nor for the other concerns.

CUMULATIVE EFFECT OF COST OF ORE.—A fundamental fact is the cost and profit on ore. Ore is the raw material for iron and steel, and its costs have an underlying and cumulative effect through all stages of production and ultimately on the prices of the finished product. The report shows that there were high intermediate profits on ore going into pig iron, with marked cumulative effect on all finished products.

COST OF STEEL RAILS.

It is impossible to give here the detailed cost figures of the full report. Simply the general principles are stated, the nature of the information, and its more striking relations to the public interest. An illuminating view of costs in general, however, can be had from an outline of steel-rail production and costs.

Starting with the chief raw materials, ore and coke, the "book cost" of ore for the five-year period was $2.64. The only "transfer" profit in the cost of ore itself was an intercompany royalty of $0.02 per ton, leaving a net average cost of ore of $2.62.

For Connellsville coke, the principal kind used, the cost was $1.43 (net ton), with no intermediate profits.

Passing now to the next step, Bessemer pig iron. Intermediate profits in ore and in coke, as they go into pig iron, are large. Furthermore, these costs, profits, and freights to the furnace are multiplied because it takes about 1.8 tons of Bessemer ore and over 1 net ton of coke for 1 ton of pig iron. The average book cost of the ore for 1 ton of pig iron was $7.36; coke, $3.81; and limestone, $0.43. The so-called "cost above materials," necessary for converting that ore into pig iron, was: Labor, $0.73; other operating cost, $0.80; and depreciation and general expense, $0.76. The total makes a book cost of pig iron of $13.89. Taking out now the transfer profit, $1.79, there is left a net cost of $12.10.

Advancing to Bessemer rail ingots, there appears a book cost of $17.59. All the preceding intermediate profits, however, have been carried forward in the book cost of the raw material, pig iron. Thus, the total "transfer" profits for ingots were $1.84, leaving a net ingot cost of $15.75.

For heavy Bessemer rails, finally, the book cost was $21.27. This is based on the book cost of ingots. The final transfer profits were $2.47. Deducting these leaves $18.80 as the revised cost. The total difference is thus a very considerable amount. About one-fourth of this revised cost was for labor in all stages of production, as appearing directly in the cost sheets.

In the text, the general principles and form of presentation for other products are the same as for rails.

Rail investment.—The relation of these integration profits to entire integration investment may be roughly illustrated here. The price of Bessemer steel rails has been fixed for over 10 years at about $28 a ton. The cost, eliminating transfer (but not transportation) profits, is $18.80 per ton. This leaves a margin of $9.20. The total mining and manufacturing investment (excluding transportation properties) actually behind this steel-rail production, from ore to rails, is from $80 to $55 a ton. On this investment the margin, $9.20, represents a profit of from about 11 to 17 per cent. The margin between revised cost and price must in this way be distributed over the entire investment thus attributable to the product in question.

Large and small companies—Billets.—A significant fact is the difference between the costs of large companies, which are well integrated, and small companies, which are not. A good example here is Bessemer billets. In this product intermediate profits have also accumulated through ore, coke, pig iron, etc. For the group of large companies the book cost of billets was $19.89; for small companies, $22.54. The difference was $2.65. But now taking out transfer profits, the cost for large companies was $17.56, and for small companies $21.69, a difference of $4.13 between the two. The large companies represented here included the Steel Corporation, the Republic, Lackawanna, and Jones & Laughlin steel companies.

Part of this difference in favor of large companies must, of course, cover a greater investment, due to higher integration; part is due to superior efficiency resulting from such integration; but part represents also monopolistic control, especially in ore.

In so far as this difference means a larger per cent of return on each dollar of investment, it is a real difference in industrial position between the two groups. This difference must be considered in any public action affecting both classes of companies.

OTHER PRODUCTS.—The Bureau has not attempted to revise these costs beyond the simpler finished products. As the elaboration increased, the difficulties of revision increased disproportionately. The chief intermediate profits, however, are in the raw materials, ore and coke, and certainly largely included in the pig iron. Accordingly, they are necessarily carried forward into all finished steel products.

A broad survey of "book costs" of steel products can, however, be obtained from the following table. These costs *have not been revised,* and therefore include considerable transfer profits.

UNREVISED BOOK COSTS.

Products.	Total cost.	Products.	Total cost.
Open-hearth billets	$20.87	Wire rods	$27.21
Universal plates	21.82	Bright coarse wire (net tons)	29.12
Structural	26.52	Black sheets (net tons)	39.37
Merchant bars	28.12	Tin and terne plate	71.23

INTEGRATION COSTS OF UNITED STATES STEEL CORPORATION.

For the foregoing combined costs of a number of concerns the Bureau computed the revised costs. But for the Steel Corporation the Bureau received, from the Corporation itself, its book costs of various products and the record which it kept of its own intermediate profits on such products for the year 1910.

Its intermediate profits are the highest and its net costs are the lowest. This fact, and its unique character and dominating position, make the costs of this Corporation a matter of public importance.

The Steel Corporation is by far the most highly integrated concern in the industry. It not only makes pig iron, steel, and most of the various rolled products, besides some more elaborated articles, but it also mines its own ore and coal, produces its own coke, and does all this more completely than any competitor. Finally, it links up its ore mines with its furnaces by its own rail and vessel lines and dock companies. In its control of ore railroads, both north and south of the Lakes, it stands in a class by itself. For this reason its "transportation" profits, as well as transfer profits, are here deducted to show its net or "integration" costs.

The results of this integration and of the Corporation's position in the industry are shown by its total integration costs, as follows:

Integration cost of ore, when mined and transported to lower Lake ports, $2.40. The book cost was $2.88.

Bessemer pig iron, integration cost, $10.21. The book cost was $14.39. Included in both cases is an item of general expense and depreciation—"additional costs"—approximated at $0.50.

Bessemer rail ingots, integration cost, $12.77. Book cost, $17.45. (Including in both cases "additional costs" approximated at $0.60.)

Heavy standard Bessemer rails, integration cost, $16.67. Book cost, $21.53. (Including in both cases "additional costs" approximated at $1.30.) The difference here, $4.86, is about equally divided between transportation profit and transfer profit. This division for rails gives a general idea of the importance of transportation profits.

These integration costs are the lowest in the domestic industry. They can not, however, be compared with the combined figures previously given for 1902 to 1906, because of the difference in the kinds of profit eliminated, the difference in dates, and the difference in companies.

The intermediate profits which were eliminated to reach these low costs are the largest per ton in the industry. But they must be set against the most extensive investment per ton of product. The margin between these costs and selling prices must cover a return on all the agencies of mining, transportation, and manufacture, from the ore and coal to the finished product.

PROFITS ON RAILROADS AND ORE RESERVES.

The most significant profits were those on ore and on railroad transportation. In so far as the Steel Corporation enjoys monopolistic power, it lies chiefly in these two factors.

The Bureau's revisions indicate a rate of profit of about 10 per cent (for the period 1902 to 1906) on the average total investment of the Steel Corporation in ore (as estimated by the Bureau in Part I of this report, already issued). Whether such a rate of return is reasonable in itself is not of first importance. The essential fact is that 10 per cent profit is earned on the whole ore holding. Thus, while earning 10 per cent, the Steel Corporation can also carry a vast ore reserve far in excess of its present requirements and so large as to have distinctly monopolistic features, can exercise on the entire industry the undefined but real power that such concentration of the ultimate resource must give, and can assure itself of the certain increment of value that will inevitably occur with the diminishing of our available ore supply so long as the existing conditions of concentration are allowed to continue.

The ore rates on its two ore railroads have been excessive. In so far as they exceed a reasonable return, they not only benefit the Corporation by a high profit on the ore of other shippers, but correspondingly handicap the business of such competitors, who must ship over these roads. These rates were reduced in November, 1911.

Such control of public agencies of transportation by an industrial corporation carries with it just such possibilities of abuse, and raises the question whether the public interest in this industry does not require a segregation of the ore railroads of the Steel Corporation.

Very respectfully,

HERBERT KNOX SMITH,
Commissioner of Corporations.

The PRESIDENT.

REPORT OF THE COMMISSIONER OF CORPORATIONS ON THE STEEL INDUSTRY.

Part II.—COST OF PRODUCTION (PRELIMINARY REPORT).

CHAPTER I.

SUMMARY OF RESULTS.

Certain salient points are brought out by this investigation of costs. These points will be discussed in detail, but for convenience are here stated in summary form, as follows:

1. That cost statements for iron and steel products vary greatly on account of differences in scope of operations and in legal organization and accounting methods of different companies. Therefore, the statement and use of such cost data require the most careful discrimination.

2. That the "book costs" of highly integrated concerns (that is, those companies which link up under one control successive stages of production of materials and finished commodities) are not net costs, because they include large items of intermediate profit. These profits occur as the materials pass from one stage of production to another, because these materials are transferred from one department or subsidiary to another at market prices or at arbitrary "transfer" prices, instead of at cost.

3. That the average costs differed greatly, according as such intermediate profits were included or excluded. For example:

Products.	Cost including all intermediate profits.	Cost excluding intermediate transfer profits on materials.[1]
Lake ore	$2.64	(2)
Bessemer pig iron	13.89	$12.10
Large Bessemer billets	20.11	17.90
Bessemer standard rails	21.27	18.80

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[1] This cost does not exclude, however, transportation profits, which are considerable in amount for the Steel Corporation, as explained later. (See p. 70.)

[2] No difference except for a trifling amount of intercompany royalty.

The above are average costs for companies having a very large proportion of the total production in the United States for the five years 1902 to 1906.

4. That if all these companies are divided into two groups—large companies which were all highly integrated, and small companies which generally were not well integrated—the average costs of the two groups differed decidedly. These differences were more marked when intermediate profits were excluded. For example:

Products.	Cost including all intermediate profits.		Cost excluding intermediate transfer profits on materials [1]	
	Large companies.	Small companies.	Large companies.	Small companies.
Lake ore	$2.67	[2] $2.49	(3)	(3)
Bessemer pig iron	13.86	14.27	$11.93	$14.21
Large Bessemer billets	19.89	22.54	17.56	21.69
Bessemer standard rails	21.27	....	18.80	....

[1] This cost does not exclude, however, transportation profits, which are considerable in amount for the Steel Corporation, as explained later. (See p. 70.)

[2] See pp. 46–47.

[3] No difference except for a trifling amount of intercompany royalty.

These differences between the two groups are, of course, largely due to the fact that the more steps in production controlled by one concern the more intermediate profits go to that concern, instead of being paid to outsiders. Accordingly, when intermediate profits are excluded, the net cost for an integrated concern is less than for one not so highly integrated. It should be observed that the above cost figures show costs simply exclusive of transfer profits on materials, and not exclusive of transportation profits. Such transportation profits are earned by certain large companies, and above all by the Steel Corporation.

5. That while highly integrated concerns have a lower net cost than nonintegrated concerns, and therefore a higher margin (not rate) of profit between costs and prices, yet, on the other hand, being so integrated, they have a larger investment to be covered by this margin of profit over net cost.

6. That the costs for this period (1902 to 1906, inclusive) are substantially representative of present conditions. This is shown by a comparison of costs for a number of important selected plants for several products from 1902 to 1906, inclusive, and for 1910.

7. That the United States Steel Corporation has a special advantage in cost of production on account of its more complete integration, particularly in producing all the ore and coke it uses, and in having railroads for ore transportation, which branches of its business

yield great profits. The costs of the Steel Corporation are especially reduced if these intermediate profits are excluded, as is shown by the following examples for 1910:

Products.	Book cost.	Integrated cost excluding intercompany profits on materials and transportation.
Lake ore	$2.88	$2.40
Bessemer pig iron	14.39	10.21
Bessemer standard rails	21.53	16.67

In considering these integration costs of the Steel Corporation the much more extensive and diversified investment of that company should also be taken account of. The importance of this investment factor is clearly brought out in this report.

8. That the indicated investment per ton of product for Bessemer steel rails for the period 1902 to 1906, taking conditions of business then prevailing, ranged from $80 to $55 per ton of rails. On the basis of a price of $28 per ton of rails the profit for all companies whose costs (excluding transfer profits only) are shown above ($18.80 per ton) would be from 11 to 17 per cent on the investment.

9. That the prices of Lake ore have been kept for many years at an unreasonably high level compared with the cost of production and the cost of the investment in the producing ore properties. Consequently, integrated concerns, transferring such ore to the pig-iron producing departments of the business at those high prices, necessarily show an unduly high book cost for pig iron and for various steel products made from pig iron.

10. That this policy in regard to ore prices has two important results. For companies selling ore it tends to make remunerative the investment in vast ore reserves which are not at present utilized, and to unduly enhance the value of such properties. It also tends to make the cost of iron ore excessively high to companies which must purchase it in the open market, and thus prevents them from becoming effective competitors in pig iron or in steel products made therefrom.

CHAPTER II.

THE COST PROBLEM AND SCOPE OF REPORT.

Section 1. The importance of costs of production.

The question of the cost of production is obviously of great public interest in connection with industries which, like the steel industry, enjoy the benefit of protective tariff duties. It is also important in connection with profits, particularly with respect to the profits made in the several branches; that is, for ore, pig iron, and various products of steel. This matter is of special significance because the steel industry is based on a natural resource the control of which is characterized by certain monopolistic features.

As the various iron and steel making enterprises differ in their control of such natural resources, their costs and profits likewise naturally show large differences. The concern which enjoys very large profits in a prior stage of the business which are not enjoyed by a competitor, even though their subsequent costs for similar products are substantially equal, is able to put such competitor at a great disadvantage.

Section 2. Problem of stating costs of production.

Production costs of various iron and steel products and of the several raw materials differ widely for different concerns, not only on account of the ordinary variations in skill or good fortune in management, advantages in location, investment, etc., but also particularly because of the following two factors:

1. Differences in scope of operations or degree of integration.
2. Differences in legal organization and accounting practice.

Differences in scope of operations or integration.—The differences in scope of operations of different concerns are a fundamental fact which affects the net or absolute costs of production. Some concerns are highly "integrated;" that is, their operations cover the production (and sometimes even the transportation) of the raw materials, and the succeeding stages of manufacture of crude and finished products. Other concerns are not integrated at all, or only in a comparatively small degree. Such concerns must therefore purchase raw materials—as, for example, ore and coke for making pig iron, from other producers at prices which are generally considerably higher than the cost of producing them. Other things being equal, the integrated enterprise has therefore a lower cost of production than the nonintegrated enterprise. On the other hand, it has also, of course, a larger investment.

It is absolutely essential to keep this investment factor clearly in mind in any study of costs. This point can hardly be overemphasized. Costs and prices by themselves afford no criterion whatsoever for judging profits unless the extent of the investment is also taken into consideration; that is, if a company is highly integrated, so that its business extends over a large number of steps in the production of steel, its profits must also extend over all its investment in those various processes, and should be commensurate with such investment.

DIFFERENCES IN LEGAL ORGANIZATION AND ACCOUNTING PRACTICE.—The legal organization of enterprises has often a very important effect on the book costs of production, particularly if such enterprises are highly integrated. Concerns which embrace mining operations, transportation, and manufacturing frequently organize separate companies for these different branches. Sometimes the laws require such separation in legal organization, as, for example, for railroads and certain mining enterprises. Under such conditions it is usually the case that the products or services are sold by one subsidiary to another subsidiary at prevailing market prices, or at arbitrary "transfer" prices, which ordinarily include a profit over and above the actual cost to the first concern. Hence, from the standpoint of the accounts of the subsidiary company, it is of course necessary to include the prices thus paid in its own general profit and loss accounts, and likewise, therefore, in its cost accounts, which when correctly kept are an integral part of the profit and loss accounts. If these several branches of the concern were put under the direct operation of one company, there would be no necessity for charging market prices instead of actual costs. Nevertheless, this is sometimes done. For example, a company making pig iron, crude steel, and finished steel products may transfer its pig iron from its blast furnaces to its steel-making department at a price which includes a profit, just as though it were selling it to some outside interest. While of course this increases the book cost of making steel on the cost accounts of the steel department, obviously it does not increase the real cost to the company as a whole.

The costs as kept by the various subsidiaries of an integrated organization may, for convenience, be referred to as "book costs" as distinguished from revised costs, from which the intermediate or so-called "intercompany" profits have been eliminated.

The differences in cost due to the legal organization of a given concern, or group of productive activities which belong to a single private interest or group, or to merely technical differences in methods of cost accounting, are, however, of little public interest, and their elimination shows what the costs are for a given enterprise taken as a whole, and this is much more significant. In fact, this is the only satisfactory way of reaching a real or significant cost in the steel industry as it now exists. Obviously costs which are affected by legal or arbitrary divisions of one business are likely to be more or less artificial.

It is evident that the problem of cost of production embraces two stages of discussion—(1) book costs, the costs as shown by the accounts of the companies, and (2) net costs, i. e., the costs after the elimination of intermediate profits.

Section 3. Significance of investment.

In whatever form the costs of a concern are stated, the significance of the cost and of the margins between cost and selling price can not be fully appreciated without taking into account the investment in plant and other capital utilized in that part of the production for which the cost is stated. Thus, in the case of a concern comprising in a single organization ore mines, coke works, and blast furnaces, the cost accounts for pig iron may represent the net cost, without any allowance for profit on the ore or coke. Therefore the margin between such cost and the selling price of pig iron would constitute the return on the investment, not only on the blast furnaces, but also on the ore mines and coke works. On the other hand, in the case of an enterprise having separate companies for each of these stages of production, the margin between its book cost and the selling price of pig iron would state the return on the investment for blast furnaces only, because the blast-furnace company would take over the ore and coke at a price that would pay a profit to the ore and coke companies. Assuming that in each instance the technical conditions are similar, and the operations are conducted with equal efficiency, it is obvious that there should be a larger margin in the case of the first company than in the case of the second.

If these intermediate profits were known to represent simply a fair return on the investment, there would be perhaps no necessity for eliminating them (except for the reason that not all companies have their costs computed on the same basis). The conditions of competition, and particularly with respect to the exploitation of natural resources and the control thereof, might conceivably be such that it could be safely assumed that the profits were reasonable.

As a matter of fact, however, the profits in certain branches of the business, notably in the production of Lake ore, are regarded by the Bureau as unreasonably high. This is largely due to monopolistic control of production and to price understandings among ore producers. Hence, the only satisfactory way to present the costs of pig iron and products made therefrom is to eliminate any profit on ore which enters therein, and then to present such data as are available for judging what a reasonable profit would be.

Investment has an important relation to cost and the margin of profit in another way, namely, where the costs of two concerns for a given product start on the same basis with respect to the degree of integration of the enterprise but where one concern has invested in plant and equipment a much greater amount of capital than another concern of equal capacity, with a view to reducing its operating costs, as, for instance, in the introduction of labor-saving devices. In this case also the margin between cost and price tends to be larger, and must necessarily be larger, in order to afford an equal rate of return to the increased investment.

Section 4. Scope of the cost statements in this report.

The cost data obtained by the Bureau and the cost statements presented in this report may be divided into three parts:

(1) Cost statements for the years 1902 to 1906, inclusive, which relate to a very large proportion of the total production of the United States for the chief raw materials and products of the iron and steel industry.

(2) Cost statements, showing comparative costs, for the years 1902 to 1906, inclusive, and for 1910, for the chief raw materials, and for pig iron, and selected steel products, at a number of typical and important plants. For ore the average costs are shown for the years 1902 to 1910, inclusive.

(3) Cost statement for the year 1910 for the Steel Corporation, for the chief raw materials, pig iron, and certain steel products.

The first statement gives a broad view of the costs in the industry as a whole over a considerable period of time. On account of its elaborate character it was impracticable to bring it down to date. It shows the costs as given on the books of account for raw materials, pig iron, and selected steel products. It shows also the costs after the elimination of intermediate transfer profits (but not intermediate transportation profits; see p. 70), with respect to raw materials, pig iron, and selected steel products. It also distinguishes the costs of the larger and well-integrated companies (for which such profit eliminations are important) from the costs of the smaller companies.

The second statement shows the relative position of costs as between 1902 to 1906 and 1910. Although not representative of the average costs for the industry as a whole, it affords a fair basis for determining whether there have been any essential changes in the conditions of production in recent years which would affect the representative character of the average costs for 1902 to 1906 given in the first statement. As this statement is used for comparative purposes only, the costs are shown as given on the books of account without the elimination of intermediate profits. Its value for comparisons lies not so much in the final costs of the manufactured products as in the costs of raw materials (ore and coke) and in the "cost above materials" of manufactured products. The term "cost above materials" is the technical term for all the operating costs except the raw material used in the process in question, and will be used in that sense in this report.

The third statement shows the position of the United States Steel Corporation in 1910 with respect to cost of production. The costs of this company are given as shown by the books of account, and also after the elimination of approximate intercompany profits, as shown by the records of the Corporation. In this case intermediate transportation profits on materials as well as transfer profits are eliminated. The costs of the Steel Corporation are the only ones given for an individual company, and this distinction is made simply on account of its unique position in the industry, particularly with respect to the supply of raw materials and the facilities for transporting them.

The Bureau made a comprehensive investigation into the costs of the raw materials and finished products of the iron and steel industry in the United States, the principal results of which are presented in this report. It also attempted to get similar costs of manufacture in the chief foreign producing countries, but while much information of a general character was obtained relating to the subject it was found impossible to obtain any comprehensive information as to the costs as shown directly on the books of account.

The cost sheets and other statements relating thereto which were furnished by the concerns whose costs are discussed in this report were verified by an examination of their books of account.

CHAPTER III.

AVERAGE BOOK COSTS OF CHIEF RAW MATERIALS AND PRODUCTS OF IRON AND STEEL, 1902-1906.

Section 1. Extent and character of data.

The first of the two forms of statement for 1902 to 1906 is now to be presented, that of the book costs. The cost data for this period cover, with but few exceptions, from 70 to 90 per cent, or more, of the total United States production of the respective products discussed, as follows:

TABLE 1.—COMPARISON OF TONNAGES OF PRODUCTION OF SPECIFIED RAW MATERIALS AND PRODUCTS COVERED BY THE COST STATEMENTS, WITH TOTAL TONNAGES PRODUCED IN THE UNITED STATES, 1902-1906.[1]

[Gross tons.]

Products.	Total tonnage produced in the United States.	Total tonnage covered by cost statements.	Per cent covered by cost statements.
Lake Superior ore	144,950,375	106,268,728	73.3
Total ore	188,493,634	126,980,827	67.4
Coke (net tons)	142,969,463	72,963,407	51.0
Bessemer pig iron	55,729,369	51,902,699	93.1
Basic pig iron	15,686,273	9,573,539	61.0
Total pig iron (including ferro and spiegel)	100,627,163	68,333,635	67.9
Bessemer ingots	48,706,135	48,586,761	99.8
Basic open-hearth ingots	30,946,392	24,731,706	79.9
Total steel ingots	83,766,238	75,228,009	89.8
Large and small Bessemer billets [2]	....	20,594,739	....
Heavy steel rails [3]	14,291,041	14,020,303	98.1
Plates and sheets	15,400,858	10,670,397	69.3
Structural shapes	7,124,576	4,417,872	62.0
Wire rods	8,457,078	6,867,310	81.2
Black plates (included in plates and sheets)	2,412,630	2,091,615	86.7
Tin and terne plates	2,369,270	1,714,464	72.4

[1] The figures of production in the United States, except in the case of ore and coke, are those reported by the American Iron & Steel Association.

[2] Statistics of the country's total production of billets are not available. It is believed, however, that the Bureau's cost data for Bessemer billets cover over 90 per cent of the total production of the country during the period stated.

[3] The production of heavy rails, as given by the American Iron & Steel Association, includes a small quantity of girder rails, while that reported in cost statements for the Bureau includes no girder rails, but does include a small tonnage of light rails. Owing to these differences in classification, the exact percentage for standard rails can not be computed, but practically 100 per cent of the production of such rails is covered by the Bureau's figures.

These percentages for ore, coke, and total pig iron are somewhat misleading if applied to the steel industry proper, since a considerable part of the total tonnage of these products was not used to make steel. Thus, a part of the total production of ore was used for the manufacture of foundry iron, and in the case of Southern ore from 1902 to 1906 hardly any at all for the manufacture of steel. Similarly, a large amount of the total production of pig iron was used for foundry purposes and not for the manufacture of steel products. The total production of coke included, of course, very large quantities not utilized in the iron and steel industry at all, which explains the exceptionally low percentage for that product. Of coke used in iron and steel manufacture, the cost data obtained by the Bureau probably represent about 60 per cent.

For Bessemer pig iron and Bessemer ingots, which were the chief basis of steel manufacture from 1902 to 1906, and also for steel rails, practically the total output of the country was included in the cost statements, while for most other important branches of steel production the proportion included was two-thirds or more of the total.

The companies whose costs are comprised in these cost statements include the United States Steel Corporation (referred to hereinafter as the Steel Corporation or the Corporation) and all the large steel-making companies (with one or two exceptions) which are chiefly engaged in making ordinary commercial products of steel. A considerable number of concerns of lesser importance, including some of distinctly small operations, are likewise embraced in the cost averages.

In furnishing their costs the several companies generally rendered statements showing simply the mine, furnace, or mill costs, which often included, as already explained above, various intermediate profits for materials produced by the same interests and taken over at market prices or at arbitrary transfer prices instead of at cost. Their costs as reported generally did not include, however, an allocation of general expenses and general depreciation of the several companies to their respective costs for particular products. These undistributed expenses were shown in their profit and loss accounts. The Bureau allowed for and included these items of "additional cost" not shown in the regular cost sheets. These items, except for the ore and coke companies, could not be allocated to particular products of such companies according to any perfect rule; but the plan adopted by the Bureau was to increase the mill costs of the several products in the same proportion as such additional costs increased the total manufacturing and producing costs of the several companies for all products. While this method tends to give an appearance of excessive additional costs—as, for example, depreciation—for the more highly manufactured products, this is not really the case, because this figure is for each successive product a cumulative one and covers all the depreciation allowances for previous stages of production not comprised in the cost of the material as given in the cost sheet for the product in question. This point, however, can be better explained later on when these additional costs are shown.

On the other hand, there is no doubt that an arbitrary rule of this character does not give very satisfactory results in allocating the expenses and depreciation really incurred with respect to particular products. The merits of this method will be discussed in more detail later. (Cf. p. 24.) At this place it is desirable to point out the advantage of it, namely, that it is simple and automatically provides that all these actual expenses or charges to depreciation shall be covered in the statements of cost. It does not preclude, however, the use of estimates for such additional costs based on normal experience rather than on a mathematical rule.

The cost of a product so arrived at is referred to in this report as the total cost to distinguish it from the mine, furnace, or mill cost.

In connection with the costs of production of the several raw materials and products, the Bureau also obtained, from the several companies which reported, profit and loss statements showing the average proceeds of sale or transfer, together with the profit thereon. While this material incidentally furnishes another and usually slightly differing figure of cost (due chiefly to the fact that the quantities in question are not exactly the same), it is chiefly important in what it shows regarding the rate and amount of profit on the products of each of the several stages of production. The "additional costs" already described were used by the Bureau in the same manner to increase the reported cost of sales as to increase the mill costs.

The costs for the period 1902 to 1906 are given herein invariably by the method of true averages for the companies whose costs are combined; i. e., the amounts of every item of cost are added together and divided by the total quantity of the product to get the cost per ton, whether for items of cost or total costs.

The cost sheets as furnished by the several companies were, of course, by no means uniform with respect to classification of items. Most of them also showed the items in far too great detail for the purposes of this report. The numerous detail items were grouped by the Bureau, therefore, under a comparatively few simple heads. The full text of this report will discuss these items in some detail, at least for the chief raw materials and products. But it is impossible to give any consideration to such details in this summary except with respect to a few fundamental facts, necessary for a proper understanding of the data presented, particularly in the elimination of intermediate profits from costs of production.

However, in order to make clear the detailed character of the information furnished by the several companies, a typical cost sheet of one company for a single product is given below. This cost sheet is not given for a single blast furnace, but for a group of furnaces at a single plant. The title of the cost sheet has, therefore, been slightly changed. Furthermore, in place of the description of ores given in the original cost sheet, the letters A, B, C, etc., have been substituted in order not to reveal the identity of the company whose pig-iron cost is stated. Again, certain items appear in red ink in the original, but are shown in bold-face type here.

[Typical cost sheet; to show form only.]

—— COMPANY. —— FURNACE PLANT. COST OF PRODUCING BESSEMER PIG IRON AT ALL FURNACES DURING YEAR 191—.

Items. (Mesaba ores to be entered separately from other ores and totals of each shown in red ink.)	Per cent metallic contents.	Gross tons.	Price.	Amount.	Material per ton.		Cost per ton.
					Pounds.	Per cent.	
A ... ore		131,784	$4.93	$649,531.59			
B ... do		349,041	4.80	1,675,216.06			
C ... do		46	4.30	197.67			
D ... do		55,606	4.83	268,358.39			
E ... do		29,439	4.98	146,680.57			
F ... do		4,046	5.25	21,222.42			
G ... do		47	4.09	192.13			
Total Mesaba ... do		570,009	4.84	2,761,398.83			
H ... do		60,695	5.22	316,030.29			
I ... do		75,460	6.10	460,196.93			
J ... do		405	5.93	2,403.21			
K ... do		12,604	4.60	57,978.40			
L ... do		29,111	4.44	129,170.44			
M ... do		2,052	3.15	6,455.13			
N ... do		4,157	5.45	22,659.62			
Total all other ... do		184,484	5.40	995,494.02			
Total ore		754,493	4.98	3,756,892.85	4,064	181.43	$9.034
Spittings		3,399	.50	1,699.50			
Scale		10,009	1.76	17,628.17			
Total cinder and scale		13,408	1.44	19,327.67	72	3.22	.046
Total ore, cinder, and scale		767,901	4.92	3,776,220.52	4,136	184.65	9.080
Light ladle scrap		4,552	11.56	52,612.66			
Runner scrap		762	12.27	9,347.82			
Pig machine scrap		2,940	12.27	36,076.95			
Off-grade iron		384	15.19	5,831.05			
Total scrap used		8,638	12.02	103,868.48	47	2.08	.250
Gross total metallic mixture		776,539	5.00	3,880,089.00	4,183	186.73	9.330
Light iron ladle skulls and scrap		4,629	11.51	53,275.49			
Heavy chilled ladle skulls and salamanders							
Blast furnace runner scrap		762	12.27	9,349.86			

——COMPANY. —— FURNACE PLANT. COST OF PRODUCING BESSEMER PIG IRON AT ALL FURNACES DURING YEAR 191—.—Continued.

Items.	Per cent metallic contents.	Gross tons.	Price.	Amount.	Material per ton.		Cost per ton.
					Pounds.	Per cent.	
Casting machine scrap		2,940	$12.27	$36,087.17			
Off-grade iron		384	14.59	5,602.25			
Slag sales				43.20			
Less total scrap produced		8,715	11.97	104,357.97	47	2.10	$0.251
Net total metallic mixture		767,824	4.92	3,775,731.03	4,136	184.63	9.079
Coke:							
Connellsville—							
Upper........per cent							
Lower........do							
Pocahontas........do							
By-product........do							
Total coke..100 per cent		421,843	3.75	1,580,650.24	2,272	101.44	3.801
Limestone		186,526	1.00	186,542.64	1,005	44.85	.448
Total materials charged		1,376,193	4.03	5,542,923.91	7,413	330.92	13.328
Fuel for miscellaneous purposes:							
Coal........gross tons		37	1.25	46.43			
Coke........do		30	3.74	112.20			.001
Coke dust........do							
Wood........cords		78	3.10	242.03			.001
Natural gas........cubic feet							
Total fuel for miscellaneous purposes				400.66			.002
Labor:							
Superintendents, foremen, clerks, and timekeepers				15,721.40			.038
Stocking and charging				62,774.55			.151
Blowing				31,057.25			.075
Casting				66,162.50			.159
All other producing labor				14,896.10			.036
Labor in repairs				41,804.15			.100
Labor in maintenance				10,939.25			.026
Total labor (enter in red ink)				**243,355.20**			**.585**
Material in repairs				37,103.03			.089
Material in maintenance				6,178.17			.015
Tools, lubricants, and miscellaneous supplies				16,039.45			.039
Refractories				7,140.80			.017
Steam (for details see exhibit). {coal coal equivalent}				121,507.94			.292
Purified gas for blowing engines							
Steam and gas transfers (credit)				**100,326.42**			**.241**
Water				9,093.87			.022
Electric light and power				12,432.33			.030
Yard switching				52,696.50			.127
Laboratory expense				6,191.43			.014
Stable expense				1,678.47			.004

—— COMPANY. —— FURNACE PLANT. COST OF PRODUCING BESSEMER PIG IRON AT ALL FURNACES DURING YEAR 191—.—Continued.

Items.	Gross tons.	Price.	Amount.	Material per ton.		Cost per ton.
				Pounds.	Per cent.	
Shop expense	....	....	$10,319.47	....	....	$0.025
Dry blast plant expense	....	....	....	....	....	....
General works expense	....	....	36,850.18	....	....	.089
Relining and renewal fund	....	....	74,856.60	....	....	.179
Contingent fund	....	....	12,476.10	....	....	.030
Total cost above materials charged	....	....	547,993.78	....	....	1.318
Credit for surplus gas to other departments.						
Credit	....	....	78,758.06	....	....	.189
Grand total cost	....	....	6,012,159.63	....	....	14.457

Total tons produced, 415,871. Tons produced since January 1st .... Average cost per ton since January 1st............

Number of days in operation, 996. Cubic feet air blown per minute .... Average temperature of blast............

Average tons per day, 417.5. Cubic feet air per pound of coke .... Average top temperature..........

Per cent iron produced with sulphur above .05% .... Per cent iron produced with silicon above 1.25%................

Average manganese in spiegel..........%. Average manganese in ferro manganese ....%

Production.	Tons.	Per cent.
Hot metal	318,811	76.67
Pig iron—sand	....	....
Pig iron—casting machine	96,918	23.30
" " chilled	....	....
" " castings	142	.03
Total production	415,871	100.0

Theoretical furnace yield............ 56.63%

Actual furnace yield............ 54.17%

Furnace loss....... 2.46%

Per cent Mesaba ore used......... ....%

Tons made on present lining.

Iron................

....

Total...............

Flue dust produced..........tons..........pounds per ton of iron.

Flue dust used...............tons..........pounds per ton of iron.

Date furnace blown in ...., out...............

COST SHEET FOR ALL FURNACES.

This cost sheet shows, of course, only the furnace cost, and does not contain any provision for "additional costs" mentioned above. It illustrates the great detail in which such cost statements are made. The cost sheets for other products, such as rails, show the items of cost with equal minuteness.

As already stated (p. 6), the average costs for the five-year period 1902 to 1906 are to be summarized, first, according to the results shown in the cost sheets and accounts of the several companies, with the addition of general items ("additional cost") shown in the profit and loss accounts (p. 10), but without any elimination of intermediate or intercompany profits arising at some prior stage of production. After considering these costs and some of the facts concerning intermediate profits, certain other statements of cost are presented in Chapter V showing the effect of the elimination of intermediate profits arising from the sale or transfer of materials from one stage of production to another within the same concern (but not the profit from transportation of the materials used in manufacture). For this form of statement the average costs are also distinguished as between large companies and smaller companies.

The average total book cost—i. e., the cost including all additional costs for general expense and depreciation and not excluding the intermediate profits on transfer or transportation of materials—will now be summarized for the period 1902 to 1906.

For the chief raw materials, namely, ore and coke, and pig iron, the varying character of the items of cost make it necessary to state the costs separately, but the rolled steel products may be conveniently combined in a single table.

Section 2. Book cost of ore.

LAKE ORE.—The cost of ore is generally the prime cost in iron and steel manufacture. Taking the steel industry alone, during the period in question the great bulk of the ore used was that of the Lake Superior region. The only other important domestic source of ore supply was the South; but almost all this ore was used, from 1902 to 1906, in the production of foundry iron, for cast-iron products.

The Lake Superior ore is mined in several ranges in Minnesota, Michigan, and Wisconsin, two important ranges, namely, the Mesabi and the Vermilion, being located in Minnesota, and three ranges, namely, the Gogebic, Marquette, and Menominee, being located in the northern peninsula of Michigan, two of them lapping over into Wisconsin. The methods of ore mining are in general similar to those for mining other minerals. It is important to note, however, that a good deal of the ore on the Mesabi range is mined from open pits. The costs of production at the mine differ considerably, on the average, between the Mesabi Range on the one hand and the other ranges (which are known as the Old Ranges, because they were the first in which mining was developed), and it is important to note these differences by ranges. Moreover, as the ore is sold not at the mine but at lower Lake ports (e. g., Cleveland, Chicago, etc.), and as there are important differences between the several ranges in the cost of transportation to the lower Lake ports, it is desirable to distinguish their costs at lower Lake ports also. This transportation cost is comprised of (1) rail transportation from the mines to upper Lake ports and (2) vessel transportation from upper to lower Lake ports. Both of these differ to some extent for the several ranges.

The table following shows the average book cost of Lake ore at lower Lake ports, by ranges, for the five-year period 1902 to 1906:

TABLE 2.—AVERAGE BOOK COST PER GROSS TON OF LAKE SUPERIOR ORE AT LOWER LAKE PORTS, AS SHOWN BY THE ORE COMPANIES' ACCOUNTS (INCLUDING INTERMEDIATE PROFITS), BY RANGES, 1902-1906.

Items of cost.	Marquette Range.	Menominee Range.	Gogebic Range.	Vermilion Range.	Mesabi Range.	Total and average.
Tons mined	12,616,253	11,358,357	11,548,988	6,260,574	64,484,556	106,268,728
Labor	$0.79	$0.78	$0.78	$0.50	$0.26	$0.45
Other mining	.57	.58	.53	.44	.26	.37
Royalty	.10	.24	.39	.33	.26	.25
Cost at mine	1.46	1.60	1.70	1.27	.78	1.07
Rail freight	.30	.40	.40	.99	.80	.67
Lake freight	.68	.59	.77	.77	.77	.74
Cost lower Lake ports	2.44	2.59	2.87	3.03	2.35	2.48
General charges	.18	.34	.22	.17	.10	.16
Total book cost	2.62	2.93	3.09	3.20	2.45	2.64

The average book cost of Lake ore at lower Lake ports during the five years 1902 to 1906 was $2.64 per ton. There were considerable differences in book cost for the several ranges.

The average cost at mine, including royalty, was $1.07 per ton, and ranged from $0.78 for the Mesabi to $1.70 for the Gogebic. The average cost at mine for the Old Ranges (i. e., all except the Mesabi) was $1.54 per ton, the average royalty being $0.25 per ton, or almost the same as for the Mesabi, which was $0.26.

The Mesabi range enjoyed, therefore, a large advantage in respect to cost at mine, but its transportation costs were higher than any of the Old Ranges except the Vermilion. The prevailing rail rate for the Mesabi was $0.80 per ton, for Vermilion it averaged nearly $1 per ton, and for the other Old Ranges rates varied from $0.40 to $0.30 per ton. The average Lake rate was the same for the Mesabi, Vermilion, and Gogebic, namely, $0.77 per ton, but somewhat lower for the other two ranges, namely, $0.68 for the Marquette and $0.59 for the Menominee.

Taking the cost at lower Lake ports, that of the Mesabi was $2.35 per ton as against $2.70 for the Old Ranges combined; adding the general charges, that of the Mesabi was $2.45 and that for the Old Ranges combined $2.93.

The total average book cost for all ranges, as stated above, was $2.64. This average represents the cost of about 73 per cent of the total tonnage produced during 1902 to 1906 in the Lake Superior district. It includes large profits to railroads and substantial profits to ore fleets in the charges for rail and lake transportation, which accrued in large part to the steel-making interests consuming the ore. Thus, the rail rates charged on a large part of the Mesabi and Vermilion ore yielded a large profit to the Steel Corporation, while several producing companies operated ore vessels and made large profits on the ore carried.

Southern ore.—By far the most important other ore-mining district was the South, although even this was of little significance in comparison with the Lake Superior district. The average cost of Southern ores is very low; but this ore is very much inferior in grade to Lake ore, containing a much smaller proportion of iron, and none of it being of Bessemer quality. The costs of Southern ore were not as carefully kept as for Lake ore, but charges for depreciation and royalty were naturally lower on account of its inferior quality. As the ores are sold and used in the district where they are produced, thus differing from the Lake ore, no charges for transportation appear in the cost statements. The average mine cost of 12,164,584 tons of Southern ore in the five years 1902 to 1906 was $0.73 per ton, as follows:

Labor	$0.52
Other mining expenses	.16
Depreciation and royalty	.05
Total mine cost	.73

As most of the Southern mines are owned instead of being leased, the item of royalty is partly represented by the allowance for depreciation. The average mine cost of Southern ore was $0.05 lower than the Mesabi, chiefly on account of the low depreciation and royalty on Southern ore due largely to its inferior quality. Eliminating charges for depreciation and royalty, the remaining mine cost of Mesabi ore was considerably lower. The average mine cost of all Lake ore on the same basis, however, was much higher than for Southern ore.

The costs at the furnace for Southern ore, however, include very small transportation charges, a decidedly important factor in the lower total cost figures for such ore.

For some iron and steel making concerns on the lower Lakes (as, for example, those located at Cleveland, Buffalo, or Chicago) the cost of ore at lower Lake ports practically covers the total cost delivered at the furnace. For other producing districts (such as Pittsburgh or the Shenango and Mahoning Valleys) a rail freight charge must be added to the cost at lower Lake ports to give the total cost at the furnace.

Profits on transfers.—The cost of ore at lower Lake ports is important, because it is the usual point of sale. Even those concerns which produce and transport their own ore compute cost at furnace on the basis of the market prices at lower Lake ports, adding freight charges to such market prices instead of to the actual cost at lower Lake ports.

There is, as a matter of fact, a very large margin of profit between cost and market price of ore at lower Lake ports. This ore profit has a very important bearing on the whole industry. For the five years 1902 to 1906 the profit and loss accounts of these ore-producing interests show that the sales and transfers of over 109,000,000 tons of Lake ore yielded an average profit of $0.66 per ton. On transfers alone (these excluding sales to outside parties) the average profit was no less than $0.75 per ton. The taking of these intermediate profits thus greatly increased the book cost of the ore in the pig iron for those companies which produced their ore (p. 48).

As these profit and loss statements respecting the price and cost of Lake ore are of importance in the subsequent discussion of the net cost of ore, the average costs shown by these statements for the five years 1902 to 1906 should be noted here, namely, $2.67 per ton at lower Lake ports. This is practically the same as the production cost, computed from the cost sheets, at lower Lake ports noted above, namely, $2.64 per ton. The difference in cost of $0.03 per ton was chiefly due to comparatively slight differences between the tonnages of production (shown in the cost sheets) and the tonnages sold (shown in the profit and loss sheets).

Section 3. Book cost of coke.

The principal blast furnace coke production of the United States is found in the Connellsville region, in Pennsylvania. The product of this district, particularly during the period 1902 to 1906, was the one chiefly used in almost all the large iron and steel producing districts except the Southern.

Beehive coke.—In this process the coal is converted into coke in ovens of beehive form and without the recovery of any by-products. The Connellsville coke is all produced in beehive ovens. The Southern district, although second in importance, had a comparatively small production. The only other important district producing beehive coke was the Pocahontas, but there was considerable miscellaneous beehive coke production for which cost data were obtained by the Bureau.

The cost of beehive coke by the chief districts of production for the five-year period 1902 to 1906 is shown in the following table:

Table 3.—AVERAGE BOOK COST PER NET TON OF BEEHIVE COKE, AS SHOWN BY THE PRODUCING COMPANIES' ACCOUNTS, BY DISTRICTS, 1902–1906.

Items of cost.	Connellsville district.	Birmingham district.	Pocahontas district.	Miscellaneous.	Total and average.
Tons produced	53,154,034	7,513,182	4,170,396	4,214,446	69,052,058
Labor	$0.97	$1.73	$1.26	$1.92	$1.13
Other operating	[1].26	[2].59	.27	[3].70	[4].32
Depreciation and royalty	.20	.11	.21	.11	.19
Total	1.43	2.43	1.74	2.73	1.64

[1] Including credits $0.03.

[2] Including freight $0.16.

[3] Including freight $0.03.

[4] Including credits $0.03, and freights $0.02, or net deduction of $0.01.

These costs comprise those for mining the coal as well as for making ie coke.

The cost of labor for the Connellsville coke averaged only $0.97 per on as against $1.26 for the Pocahontas district and $1.73 for the irmingham district. The other operating costs for the Connellsville oke were low also, but on account of the greater value of this coal ie charges for depreciation and royalty (mostly coal extinguishment) ere higher than for the Birmingham district.

While the cost of Connellsville coke was the lowest, it must be emembered that a considerable item, and sometimes a very large em, of freight must be added to this cost to get the cost at the blast urnaces where it is used. The same is true of Pocahontas coke. The outhern coke, on the other hand, is produced at or very near the laces of consumption. These coke costs include no transfer profits or the coal used in the Connellsville and Pocahontas districts and ractically none for the Birmingham district.

By-product coke.—This process involves the use of much more laborate ovens than the beehive process, and results in the recovery f valuable by-products such as tar, gas, ammonium sulphate, etc., the alues of which are customarily treated as credits to the cost of the oke. The Bureau had returns for the production of 3,911,349 tons f by-product coke. This was generally made at the iron and steel orks, and involved, in addition to the cost of coal at the mine, a arge item of freight on the coal, including some transfer profits on coal.

The average cost of this by-product coke for the five years 1902 to 906 was as follows:

ABLE 4.—AVERAGE BOOK COST PER NET TON OF BY-PRODUCT COKE, AS SHOWN BY THE COST ACCOUNTS (INCLUDING INTERMEDIATE PROFITS), 1902-1906.

Items.	Cost.
ons produced	3,911,349
oal (at mine)	$1.27
oal freight	1.25
abor	.52
ther operating	.57
epreciation	.10
Gross cost	3.71
et credit for by-products	.76
Net cost	2.95

While the cost of this coke was high compared with beehive coke, this was largely due to the freight included in the coal used. It was produced at the place of consumption, so that there was no additional freight on the coke.

Profits on transfers.—In most cases coke produced by a given interest was transferred to allied departments of iron and steel production at a large profit, but in some cases at cost. Such charging of transfer profit in the case of companies using their own coke had the effect, as already explained (p. 5), of enhancing the book cost of coke used in such branches of manufacture without any corresponding real increase in expense. For the Connellsville coke used during the five years 1902 to 1906 such transfer profits for the companies whose costs and sales were examined by the Bureau averaged no less than $0.57 per ton on transfers only.

Section 4. Book cost of pig iron.

Kinds of pig iron.—The costs of pig-iron production differ so widely for the different kinds of pig iron and also as between Northern and Southern districts that it is necessary to present them in three different groups. These groups are: (1) Bessemer pig iron, which was used almost entirely for making Bessemer steel, and produced only in the Northern districts; (2) basic pig iron, used for making open-hearth steel, and produced in the Northern districts; and (3) Southern pig iron, used chiefly during 1902 to 1906 for foundry purposes, although also to a slight extent for open-hearth steel production. The first two kinds of pig iron were made from Lake Superior ores and Connellsville coke for the great bulk of the output covered by the cost statements, while the Southern pig iron was made from the local ores and coke of the Birmingham district.

The following table shows the average costs for these three kinds of pig iron in summary form for the five-year period 1902 to 1906. These costs, it must be repeated, are the book costs, with various intermediate profits included in them. The elimination of these profits will be considered later. In order to show clearly the meaning of this cost statement, certain statistical data as to prices, yield, etc., also derived from the cost sheets, are subjoined thereto.

BLE 5.—AVERAGE BOOK COSTS PER GROSS TON OF SPECIFIED KINDS OF PIG IRON, SHOWING FURNACE COST AS GIVEN IN THE COST SHEETS (INCLUDING INTERMEDIATE PROFITS), TOGETHER WITH "ADDITIONAL COSTS" (DERIVED FROM PROFIT AND LOSS ACCOUNTS), 1902-1906.

Items.	Bessemer iron.	Basic iron.	Southern iron.
ons produced	51,902,699	9,573,539	5,339,766
et metallic mixture	$7.30	$7.14	$2.35
ke	3.89	3.30	4.48
imestone	.43	.47	.27
abor	.77	.62	1.23
ther operating	.87	.77	1.19
Furnace cost	13.26	12.30	9.52
dditional cost	.75	.52	.13
Total cost	14.01	12.82	9.65
rice gross metallic mixture [1]	$4.07	$3.73	$0.95
rice net metallic mixture [1]	$3.97	$3.64	$0.95
er cent yield	54.4	50.9	40.6
rice coke, net ton	$3.37	$2.90	$2.54
ounds coke	2,311	2,282	3,523

[1] The price of the gross metallic mixture is the price of the ore, scrap, etc., at the furnace, per gross ton; lowing for the tonnage and value of the scrap recovered gives the basis for figuring the price of the net etallic mixture per gross ton, and this figure multiplied by the number of tons required to make a ton of g iron (indicated by the per cent yield) gives the cost per ton of pig iron.

The discussion following is an explanation of certain items of cost, nd also serves to bring out more clearly the causes for the differences cost for the different kinds of pig iron.

The cost of pig iron depends chiefly on the cost of the raw mate-als—ore, coke, and limestone—which are put in the blast furnace. he ore is smelted by burning the coke, and the limestone is put in facilitate the process and particularly to form a liquid slag to arry off the impurities. The other expenses, such as labor, supplies, pairs, maintenance, furnace relining, general expense, and deprecia-on, form a comparatively small proportion of the total book cost.

Book cost of raw materials.—The cost of the net metallic ixture shown in the above statements of cost comprises the total ok cost of the ore used, including small proportions of cinder and rap, less any credit for scrap recovered from the furnace. The e or metallic mixture used is only partly iron. It therefore takes ore than one ton of it to make a ton of pig iron. The net quantities metallic mixture required for the pig iron represented in the above ble averaged 1.84 tons for Bessemer pig iron, 1.96 tons for basic, d 2.46 tons for Southern pig iron, corresponding to "yields" of n per ton of ore of 54.4 per cent, 50.9 per cent, and 40.6 per cent, spectively.

The prices per ton of the gross metallic mixture (i. e., the actual prices for ore, scrap, cinder, etc., put in the furnace, without the credit for the scrap recovered), as shown below the cost statement, were $4.07 for Bessemer, $3.73 for basic, and $0.95 for Southern pig iron. These prices were, of course, the prices at the furnace, practically for ore, since that formed the great bulk of the metallic mixture, including all freight expenses and antecedent transfer profits on ore.

These great differences in the prices of the gross metallic mixture were chiefly due to differences in the freight charges on ore. For Southern ore there was but little freight, whereas for the ore for the two kinds of Northern pig iron there was not only the freight (both rail and lake) from the Lake mining districts to the lower Lake ports, but also the rail freight from the lower Lake ports (at which point the ore is generally sold or transferred) to the furnaces.

The average rail and lake transportation charge from mines to lower Lake ports for all the ore covered by the Bureau's computations (both Bessemer and non-Bessemer) was $1.41 per ton. (Table 2, p. 16.) If to this be added the average freight charge from lower Lake ports to the furnaces, which averaged $0.67 per ton for the ore used in both Bessemer and basic furnaces, the total transportation charge is $2.08 per ton. In other words, the freight charges on ore for the Northern pig iron were more than twice the price of the Southern ore at the furnace.

The great differences between the ore costs for Northern and Southern pig iron were due to these large freight charges on Northern ore and also largely to the fact (discussed in much detail later) that the Northern ore costs included considerable transfer profits on ore, the ore being transferred to the furnace above the real cost. For Bessemer and basic pig iron combined this transfer profit was about $0.65 per ton of ore used and nearly double that, of course, in the quantity of ore used to make a ton of pig iron.

The Southern ore costs included practically no transfer profit.

The costs of coke in the pig-iron cost statements may be analyzed in a similar way. They differed considerably, owing, first, to the different average prices of coke at the furnace, and, second, to the different quantities required per ton of pig iron. The coke used for both Bessemer and basic iron was chiefly Connellsville coke. The price f. o. b. Connellsville was about $2.01 per net ton in each case. The average freight to the furnace was about $1.36 per net ton for the furnaces making Bessemer iron and about $0.89 per net ton for the basic furnaces, giving furnace prices of $3.37 and $2.90 per net ton, respectively. While the higher cost of the coke per ton of pig iron in the Bessemer furnaces was chiefly due, therefore, to this difference in price at the furnace, it was also due in part to the use of a larger quantity of coke per ton of pig iron, namely, 2,311 pounds in the case of Bessemer as compared with 2,282 pounds per ton in the case of basic pig iron. For both kinds of Northern pig iron the book cost of the coke included large transfer profits.

For Southern pig iron the cost of coke per ton of pig iron was very high, namely, $4.48, not so much because the price of coke at the furnace was high (only $2.54 per ton, with very little freight expense or transfer profit included), but because an exceptionally large quantity was required to melt the low-grade Southern ores, namely, 3,523 pounds per ton of pig iron.

In the cost of limestone per ton of pig iron there was very little difference between the Bessemer and basic pig iron, as both the prices at the furnace and the quantities used were about the same in each case.

Although some of the Southern ores contain considerable lime and some of them consequently are self-fluxing, or almost so (i. e., they do not require the addition of limestone to flux them), yet on the average the Southern pig iron for which cost statements were procured by the Bureau required over 100 pounds more limestone per ton of pig iron than either the Northern Bessemer or basic iron. It should be noted, however, that for the last two years covered by these averages the quantity of limestone required for the Southern furnaces was somewhat lower than for the Northern furnaces. (See p. 109.)

LABOR AND OTHER COSTS ABOVE MATERIALS.—The labor costs for Bessemer pig iron averaged somewhat higher than for basic; this was probably due to a greater average size and efficiency of equipment for the basic furnaces. The labor costs for Southern pig iron were very much greater than for either Bessemer or basic pig iron. The chief reason for this probably was that the Southern furnaces, on account of the low grade of the ore, required the using of a much greater quantity of materials in the furnace per ton of product. Thus, for the production shown in the above table, the average quantity of ore, coke, and limestone per ton of pig iron in the Bessemer and basic furnaces combined was 3.36 tons as against 4.53 tons for the Southern furnaces, or 34.8 per cent more for the latter. Other factors accounting for the high labor cost of Southern pig iron were smaller and less efficient furnaces and the lower efficiency of labor itself.

Practically the same circumstances explain the fact that the other operating costs were higher for Southern than for Northern pig iron.

FURNACE COSTS AND TOTAL BOOK COSTS.—The table shows that the furnace cost of Bessemer pig iron was $13.26 per ton, as compared with $12.30 for basic, this difference being chiefly due to the lower price of ore and lower freights on ore and coke combined for the basic furnaces.

For Southern pig iron the furnace cost was $9.52, which was much lower than for either Bessemer or basic. The chief reasons for the higher furnace cost of Northern pig iron were (1) the large freight charges involved in assembling the raw materials at the Northern furnaces and (2) the large profits on ore and coke included in the costs of those materials for the Northern furnaces. The transfer profits on ore and coke used in making Southern pig iron were very small.

The items of "additional cost" derived from the profit and loss accounts can not be allocated except by more or less arbitrary methods of apportionment. (See p. 11.) They comprise the items of general expense and depreciation. It is probable that the Bureau has erred on the side of making the costs too high in including the full amount of these additional charges in the case of Bessemer and basic pig iron, inasmuch as the charges for general expense are incurred only in a small degree in connection with the pig-iron branch of the business for large steel companies, though the system of allocating these additional expenses gave an item of general expense of $0.36 per ton for Bessemer pig iron and $0.27 for basic pig iron. A fair average depreciation for a blast-furnace plant is $0.40 per ton of product. The allocation of "additional costs" for this item, on the principle applied, worked out to give an average depreciation charge of $0.39 for Bessemer pig iron, but of only $0.25 per ton for basic. For basic iron, therefore, the allowance for depreciation was probably too low. Taking the total additional cost, the allowance per ton is considerably too high for Bessemer and a little too high for basic. For Southern pig iron, on the other hand, it was evidently too low. These additional expenses are, therefore, stated in full as separate items, with the caution that they are undoubtedly sometimes excessive and sometimes inadequate.

The furnace cost plus the additional expenses gives the total book cost already described (p. 11). This book cost, it should be remembered, is computed without any reduction for the large intermediate profits included in the costs of the raw materials; that is to say, the ore and coke going into the pig-iron cost statement, at least for a large part of the tonnage shown, has been charged at a transfer price considerably higher than the real cost of the raw material to the concerns whose costs are shown.

It is evident that since the book costs of pig iron are thereby increased, the book cost of making steel (for which pig iron is the chief raw material) is necessarily increased also, even though no profits were charged when pig iron was sold or transferred to the steel works. As a matter of fact, however, such profits are sometimes charged.

The allocation of the "additional cost" items to the costs of pig iron still further increases the advantage of the Southern pig iron over the Northern in respect to costs, giving for the total book costs per ton $14.01 for Bessemer, $12.82 for basic, and $9.65 for Southern. As stated above, however, while these allowances for Northern furnaces were too high, those for Southern furnaces were too low. Therefore, if these allowances were all figured on a uniform basis, these additional costs for the two districts would be more nearly equal. If an additional cost of $0.50 per ton, for both general expense and general depreciation combined, be assumed, and it is undoubtedly enough for most iron and steel companies, the total costs would be as follows: Bessemer, $13.76; basic, $12.80; and Southern, $10.02 per ton.

Judging from the book cost of production simply, the Southern pig iron shows a distinct advantage over Northern basic pig iron, with which it should be compared (and not with Bessemer). As will be shown later (see p. 109), this holds true even after the elimination of intermediate profits. But it must be considered that this is counterbalanced by the much higher freight charges necessary to get the Southern pig iron to the most important markets of consumption.

Profits on pig iron sold and used.—Only a small proportion of the total quantity of Northern pig iron produced was sold or transferred at a profit. The technique of the industry has bound so closely together the blast-furnace plants making pig iron for steel production with the steel works, that the two departments of the business in most large companies are conducted on the basis of transferring the pig iron from the blast furnaces to the steel works at furnace cost, without profit. Where a concern controls several companies, however, it may transfer some of its pig iron from one company to another at a profit over the furnace cost. During the period 1902 to 1906 the records of profit and loss on Northern pig iron transferred at a profit showed transfers of 12,223,498 tons at an average price of $14.38 per ton and an average profit (for this step alone) of $0.55 per ton. There were also sales of such pig iron amounting to 3,188,377 tons, on which the average profit was $2.05 per ton. Most of the Northern pig iron, however, was transferred to steel works without any profit, so that the average profit on the total quantity sold and used was a much smaller amount per ton.

The situation was somewhat different with respect to Southern pig iron. Most of it was used for foundry purposes, and was largely sold to Northern consumers of pig iron at market prices. A part of it was used by the same concerns which produced it either for making iron castings or for conversion into steel. The total quantity of Southern pig iron transferred at a profit (which comprised practically all which was not sold) for the five years 1902 to 1906 was 1,107,837 tons, and the average transfer price was $11.32 per ton, showing an average transfer profit of $1.62 per ton. These transfer profits tended of course to enhance the book cost of the pig iron in iron castings or steel made by the same concerns which produced the pig iron.

Section 5. Book cost of steel ingots.

The conversion of pig iron into steel forms a very distinct and very important stage in the manufacture of steel products. This conversion involves a change in composition, or chemical change. It is accomplished usually, for ordinary commercial grades of steel, either in the Bessemer converter (Bessemer steel) or in open-hearth furnaces, which are distinguished as being either *acid* or *basic,* according as they use pig iron and scrap which are low in phosphorus (Bessemer iron) or pig iron and scrap which are high in phosphorus (basic iron). The steel is also distinguished, with respect to the products to be made from it, into rail ingots and billet ingots, although this has very little effect on the character of the process. During the period here under consideration this distinction has little importance except for Bessemer steel, as very little open-hearth steel was then used in making rails. The production of acid open-hearth steel is more expensive than basic open-hearth steel and is largely for special qualities, and it is not important to present the results herein. The production of basic open-hearth steel, which by 1908 exceeded Bessemer steel, was considerably less during the period here under consideration.

The following table shows the average book costs for the production of Bessemer rail ingots and Bessemer billet ingots and of basic open-hearth ingots for all districts for the five-year period 1902 to 1906, inclusive.

Subjoined to the cost statement are certain statistical data respecting the prices and quantities of materials used, etc., which are also derived from the cost sheets and are of importance in analyzing the results and in facilitating a comparison between the cost of the pig iron used, per ton, and the average costs of pig iron previously shown.

TABLE 6.—AVERAGE BOOK COST PER GROSS TON OF SPECIFIED KINDS OF STEEL INGOTS, SHOWING WORKS COST AS GIVEN IN THE COST SHEETS (INCLUDING INTERMEDIATE PROFITS), TOGETHER WITH ADDITIONAL COSTS (DERIVED FROM THE PROFIT AND LOSS ACCOUNTS), 1902-1906.

Items.	Bessemer rail ingots.	Bessemer billet ingots.	Basic open-hearth ingots.
Tons produced	19,486,978	29,099,783	24,731,706
Pig iron and scrap	$14.84	$14.88	$14.13
Manganese	.82	.31	.34
Labor	.61	.57	.92
Fuel	.18	.24	.70
Other operating	.70	.64	1.10
Rebuilding fund	....	....	.22
Works cost	17.15	16.64	17.41
Additional cost	1.05	.92	.79
Total cost	18.20	17.56	18.20
Price of pig iron and scrap used	$13.69	$13.59	$13.18
Pounds of pig iron and scrap used	2,451	2,490	2,480
Price of scrap recovered	$6.92	$7.94	$9.29
Pounds of scrap recovered	45	65	110
Net cost of waste	$1.15	$1.29	$0.95

It should be stated at the outset that a comparison of these cost averages for the purpose of determining the relative economy or advantages of the Bessemer as compared with the open-hearth process would be somewhat misleading. A more satisfactory comparison for this purpose would be found in taking a single district producing large tonnages of both sorts of steel for a particular year.

COST OF IRON AND MANGANESE.—The Bessemer process uses pig iron almost entirely (with very little scrap), and in molten form usually direct from the blast furnace, but to some extent (particularly for the Sunday production of pig iron, during which day the steel works are not operating) cold pig iron and scrap remelted in cupola furnaces. The prices at which this metal was charged into the ingot cost were usually the furnace costs at the blast furnace, which was invariably connected with the steel works for the plants whose costs are here shown. This cost of the iron (pig iron and scrap exclusive of manganese and similar additions) used per ton of product depended also on the quantity of the gross loss, the price of the metal thus lost, and the quantity and value of the scrap recovered. In other words, the net waste per ton of product which is shown below the cost statement, if added to the price per ton of the material used, gives the cost of the net pig iron and scrap. In order to show more clearly the difference between rail and billet ingots, the cost of manganese (including similar additions of a metallic character) has not been included in the pig iron and scrap in this cost statement, but is shown separately.

The costs of the pig iron and scrap for Bessemer rail ingots and Bessemer billet ingots for the production covered by the above statement were nearly the same, namely, $14.84 and $14.88, respectively.

In the open-hearth process the proportion of scrap used is very large, and for the production of the basic steel here under consideration constituted about one-half of the total pig iron and scrap. Other things being equal, the price of this pig iron and scrap tends to be lower than for the Bessemer process, not only on account of the greater proportion of low-priced scrap, but also because basic iron is used instead of Bessemer. The cost of the waste also tends to be lower because the price of the material lost tends to be lower, while the price of the scrap recovered tends to be higher, being very low in phosphorus. Hence, the cost of the pig iron and scrap for the basic open-hearth ingots was considerably lower than for the Bessemer ingots, namely, $14.13 per ton.

The average quantity of manganese which is put into the molten steel is especially large for rail ingots in order to harden them, and the cost was relatively high at $0.82 per ton, but was much less for Bessemer billet and open-hearth ingots, namely, $0.31 and $0.34, respectively.

LABOR AND OTHER COSTS ABOVE MATERIALS.—For nearly all these expenses the open-hearth process is at a distinct disadvantage compared with the Bessemer. This is due partly to the more elaborate plant and equipment necessary compared with the tonnage produced, and also to special depreciation charges which are necessary for the rebuilding of open-hearth furnaces. Thus, the item of labor per ton was more than 50 per cent higher for the basic open-hearth process. The item of fuel was also much higher; this expense is largely for natural gas or coal to make producer gas for open-hearth furnaces, and for cupola coke at Bessemer plants. The disproportion in other operating expenses was even greater. This results largely from much heavier expenses per ton for limestone (used in the open-hearth furnace), for materials and supplies, etc. The cost of steam power is the only important expense of this kind in which the Bessemer process was at a disadvantage compared with the open hearth.

Thus the cost above materials (i. e., works or mill cost exclusive of cost of pig iron and scrap and manganese) was much higher for the basic open-hearth process, being $2.94 per ton as against $1.49 per ton for Bessemer rail ingots and $1.45 per ton for Bessemer billet ingots.

Works costs and total book costs.—This higher cost above materials for basic open-hearth ingots more than offsets the lower cost of the pig iron and scrap used and resulted in a total works cost of $17.41 per ton as against $17.15 per ton for Bessemer rail ingots and $16.64 per ton for Bessemer billet ingots.

Although, as already stated, the particular average costs of ingots here compared may not be the most representative, it is evident that the works cost of open-hearth steel, in spite of the cheaper priced metal used, is generally higher than Bessemer steel. In the foregoing figures the pig iron is usually taken over at book cost. This higher cost above materials explains in part the lower price of basic iron, and, through the lower price of basic iron, the lower price of non-Bessemer ores.

The "additional costs," which have been explained above (p. 10), happened to be higher for the Bessemer ingots than for the basic open hearth. These additional costs appear very high, largely on account of their cumulative character (p. 10); that is, the pig iron being transferred to the steel works generally at furnace cost without regard to the items of additional expense, the additional costs for pig iron not being carried forward in the price thereof are practically repeated in the additional costs for ingots along with such part of these additional costs as is attributed to the process of converting the pig iron into steel.

The total book cost of ingots (i. e., the works costs plus the additional costs) was $18.20 for Bessemer rail ingots, $17.56 for Bessemer billet ingots, and $18.20 for basic open-hearth ingots. These additional costs have just been criticised above. Instead of the figures used in the table, an estimated figure for general expense and general depreciation may be given as in the case of pig iron. Allowing, of course, for the cumulative principle just described, it is estimated that $0.60 per ton would be sufficient for the Bessemer plants and $0.85 for the open-hearth plants. Adding these to the works costs already stated, the total costs of these ingots would be as follows: Bessemer rail ingots, $17 75; Bessemer billet ingots, $17.24; and open-hearth ingots, $18.26 per ton.

These costs are book costs; that is, they include, of course, all such intermediate transfer profits on ore, coke, and pig iron as may have been charged into the prices of the materials used either in preceding stages of manufacture or in the conversion of pig iron into steel, as well as transportation profits for certain companies. As shown above (p. 25), transfer profits were seldom charged on pig iron, and these when spread over the entire tonnage used in making steel averaged only a small amount per ton.

Section 6. Book costs of rolled products.

The rolling of ingots into various forms, such as billets, rails, bars, tubes, sheets, and wire rods, which constitutes a change of form in the steel, is a third stage in manufacture. In general this report does not extend beyond the rolled products. There are, however, two important exceptions, namely, drawn wire and tin and terne plate. In addition to drawn wire, there are numerous other more elaborated wire products, such, for instance, as nails, but these are not included in the Bureau's cost averages. Similarly, black sheets are often coated in other ways than by tinning, as, for instance, by galvanizing with zinc, but galvanized and other sheet products are not discussed in this report.

The following table shows the average book costs of these products for the five-year period 1902 to 1906:

TABLE 7.—AVERAGE BOOK COSTS PER GROSS TON [1] OF SPECIFIED PRODUCTS, SHOWING MILL COSTS AS GIVEN IN COST SHEETS (WITHOUT DEDUCTION OF INTERMEDIATE PROFITS), TOGETHER WITH ADDITIONAL COSTS (DERIVED FROM THE PROFIT AND LOSS ACCOUNTS), 1902-1906.

Products.	Tons produced.	Cost.						
		Raw material.	Cost above materials.			Mill cost.	Additional cost.	Total cost.
			Labor.	Other operating.	Total.			
Bessemer heavy rails (from ingots)	14,020,303	$18.29	$1.25	$1.43	$2.68	$20.97	$1.26	$22.23
Large Bessemer billets (from ingots)	17,908,033	17.72	.55	.82	1.37	19.09	1.09	20.18
Large basic open-hearth billets (from ingots)	13,422,740	18.45	.55	.97	1.52	19.97	.90	20.87
Small Bessemer billets (from ingots)	2,686,706	16.88	.66	1.16	1.82	18.70	.98	19.68
Bessemer sheet bars (from ingots)	4,808,673	16.45	.57	1.12	1.69	18.14	.84	18.98
Sheared plates (from slabs)	3,317,232	21.55	2.36	2.19	4.55	26.10	1.39	27.49
Universal plates (from ingots)	1,032,388	17.70	1.24	1.89	3.13	20.83	.99	21.82
Universal plates (from slabs)	2,007,344	21.78	1.83	1.94	3.77	25.55	.85	26.40
Structural (from ingots)	1,724,641	20.21	2.15	2.74	4.89	25.10	1.42	26.52
Structural (from billets)	2,693,231	21.88	2.54	2.11	4.65	26.53	1.23	27.76
Merchant bars (from large billets)	4,379,780	21.41	3.06	2.28	5.34	26.75	1.37	28.12
Wire rods (from billets)	6,867,310	21.42	1.53	2.28	3.81	25.23	1.98	27.21
Bright coarse wire (from rods)	6,510,368	23.50	1.62	1.87	3.49	26.99	2.13	29.12
Black sheets (from sheet bars)	2,418,214	22.99	10.39	4.12	14.51	37.50	1.87	39.37
Black plate (from sheet bars)	2,091,615	25.25	14.19	7.41	21.60	46.85	2.14	48.99
Tin and terne plate (from black plate)	38,404,002	[2] 2.67	.19	.18	.37	3.04	.14	3.18

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[1] Except for bright coarse wire and black sheets, which are for net tons, and for tin and terne plate, which are for base boxes of 100 pounds.

[2] Includes $2.04 for black plate and $0.63 for tin.

The above table shows the product,[1] the tons produced, the costs per ton of product distinguished with respect to the raw material, the labor, and the other operating expense, and the cost of the last two items (cost above materials) combined; and the cost of raw material and cost above materials, together constituting the mill cost. There are then added the "additional costs" (which the Bureau derived from the profit and loss statements of the companies), which include chiefly general expense and general depreciation not specifically allotted to the various products, or even included in the several companies' statements of manufacturing and producing cost, but which were nevertheless expenses of the business and allowances actually made for depreciation. These allowances were undoubtedly sometimes too high for the average of the total production, but a readjustment of these allowances for each product would have been practically impossible. It should also be borne in mind, as explained already (p. 29), that in consequence of the fact that each product, from the pig iron on, is generally charged into the next step at mill cost instead of the total book cost here shown—that is, without taking account of these additional expenses—the result is that these items naturally increase in a cumulative manner. Thus they tend to be higher per ton for ingots than for pig iron, for the heavy-rolled products than for ingots, and for light-rolled products than for heavy-rolled products. There were, however, great differences in these additional expenses for different companies, and the different companies did not have the same proportions of the total output for each product, and often for some products no output at all.

Furthermore, it is probable that the additional costs for the lighter rolled products are in most cases too low, on account of the methods used in allocating them. As appears from the foregoing discussion, they were too high, on the average, for pig iron and ingots, but probably about right for rails. If the total amount is assumed to be right for general expenses and not greatly excessive for depreciation, it follows that in so far as the additional costs for the earlier stages of production are cut down, they must be increased at the later stages. This view is apparently correct for the depreciation, and undoubtedly correct for general expenses. The latter are very largely incurred in connection with the sale of finished products, and more particularly such products as structural materials, merchant bar, wire products, sheets, tin plate, and tubes. Steel makers rarely sell pig iron, and generally only a small portion of their billets and other semifinished steel. Billets do not require much expense to sell, and rails probably even less.

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[1] The Bureau obtained and compiled data with regard to the costs of certain other rolled products, such as billets from acid open-hearth ingots, sheet bars from open-hearth steel, light rails, girder rails, hoops and bands, cotton ties, merchant bar from small billets, muck bar and tubes, most of which will be covered in detail in the full report. In some cases, however, the tonnage reported was too small for the results to be significant, while in some other cases the product itsel included too great a range of sizes to make the average of much value.

It should be noted in connection with costs for particular rolled products that there are often considerable differences between the average costs of products which do not seem to be proportional to the normal differences of costs of production. It is important to bear in mind, therefore, that for different plants there were marked differences in the cost of the same product, and further that in most cases the group of plants whose costs are averaged for one product is not the same as the group for another product. Thus billets were made by a great number of plants, but sheet bars by a comparatively small number, and the latter, moreover, included some of the most efficient plants in the country. This explains why the average cost of Bessemer sheet bars was lower than the average cost of large Bessemer billets, although sheet bars produced at any given plant would cost more than such billets.

It would involve a tedious discussion to consider the circumstances governing the costs of each of these rolled products. It will be sufficient to consider briefly a few of the most important ones, and to mention some of the characteristic conditions and conspicuous differences affecting book costs. In particular it is interesting to note the proportion that the labor cost bears to the total mill cost. For this purpose it is not possible here to take account of any labor costs except those which are directly entered as such in the cost sheets, but it should be clearly understood that the pay roll would, if completely analyzed and allocated, show a distinctly larger proportion.

Book cost of billets.—These are the simplest of the products rolled from ingots, and consist in typical form of lengths of steel 4 by 4 inches square. As they are only semifinished and must be rolled further to have a merchantable character (that is, to be purchased by other manufacturers than those operating rolling mills), it is not necessary during the process of rolling to cut or "crop" the defective ends so closely as for some products. The labor cost is very low compared with the cost of the ingots from which the billets are rolled. For the above noted production of large Bessemer billets, the labor cost, which was only $0.55 per ton, formed 2.9 per cent of the mill cost, while the total cost above materials, namely, $1.37, was only 7.2 per cent of the mill cost. The mill cost of large Bessemer billets was $19.09 per ton, and the total book cost—that is, including profit and loss items of general expense and depreciation—was $20.18 per ton.

Book cost of rails.—The cost of rails, made from rail ingots, is also chiefly a question of the cost of the raw material. The labor cost for the above-noted production was $1.25 per ton, which formed only 6 per cent of the mill cost, and the total cost above materials was $2.68 per ton, or only 12.8 per cent of the mill cost. Rails, moreover, are not a particularly simple product, because they must be made with great care, and the ends must be cropped off during the process of rolling to a greater extent than for billets. Furthermore, they require considerable labor for straightening and finishing after they are cold.

The total mill cost was $20.97 per ton, and this with the additional costs made the total book cost $22.23 per ton.

BOOK COST OF PLATES.—It is interesting to compare the costs of sheared plates from slabs with universal plates from slabs. Slabs are a semifinished product like billets. Sheared plates are rolled from the slabs and then the rough edges are sheared off to give them uniform gauge and the required form. Universal plates are rolled directly both to uniform gauge and required form. The former process involves more labor than the latter, which is largely automatic. This result is shown in the item of labor cost, which was $2.36 per ton for sheared plates from slabs and $1.83 per ton for universal plates from slabs; a substantially proportional difference appears for the total costs above materials. Consequently, although it happened that the slabs cost a little less for sheared plates than for universal plates, the mill cost was lower for the latter.

That the universal plates from ingots had a lower cost above materials than universal plates from slabs, in spite of the fact that the former included two stages of rolling as compared with one for the latter, was due chiefly to the fact that they comprised plates of greater average thickness of gauge, enabling the production of a much larger tonnage during a given period of time, thus making the labor cost per ton and all other items of cost above materials much lower.

BOOK COST OF MERCHANT BARS.—This product includes a variety of shapes, such as rounds, squares, flats, etc., and a very great variety of dimensions. It is the chief article of steel required in the manufacture of machines, implements, and tools, besides a great many other kinds of ordinary hardware. The merchant bars shown in the above table were rolled from large billets, which shows that the bars produced were chiefly of the heavier shapes. Owing to the great variety of forms and sizes of steel bars and the comparatively small tonnages at most mills for a given size, the labor cost tends to be higher than for many products which otherwise would involve quite as much labor per unit. For the same reasons the other items of cost above materials tend to be high. The total cost above materials for the steel bars shown in the foregoing table was $5.34 per ton, and constituted 20 per cent of the mill cost, which was $26.75 per ton. The average book cost was $28.12 per ton.

Book cost of wire rods.—This product, like hoops, is rolled out to such small dimensions that it is coiled up as it emerges from the mill. The most modern mills are largely automatic, a billet being started at the beginning and running through a succession of rolls with rapidly accelerating speed as it decreases in diameter. Although the gauges of drawn wire are very numerous, the gauges of wire rods are few in comparison, and an immense tonnage is rolled for the standard sizes of such widely used articles as fence wire and wire nails. The cost above materials for wire rods is chiefly on this account much lower than for merchant bar, averaging $3.81 per ton for the quantity covered in the foregoing table, or 15.1 per cent of the mill cost, namely, $25.23 per ton. The total book cost was $27.21 per ton.

Book cost of black sheets.—This product differs markedly from most of those previously discussed, particularly with respect to the large labor cost involved in its manufacture. The modern rolling mills for the products heretofore considered (except certain kinds of light bars and wire rods not made at the automatic or continuous mills) are generally so constructed that the material is lifted and placed between the rolls and moved either continuously forward, or back and forth, under them with the intervention of a comparatively small amount of manual labor. For sheets and allied products, however, invention has not succeeded to the same degree in substituting automatic devices. In making sheets the sheet bars are passed through the rolls and worked back and forth by laborers who stand at either side, and who are also required to double the material several times as it is reduced in thickness and expands in area. This process is also interrupted for the reheating of the partially rolled material. The number of passes through the rolls depends partly on the original thickness of the sheet bar and partly on the gauge to which the sheets are to be rolled. The sheet rollers form a class of specially skilled labor.

The cost of labor in the manufacture of black sheets constitutes, therefore, a considerable element in the mill cost. For the tonnage represented in the foregoing table the labor cost was $10.39 per net ton, or 27.7 per cent of the mill cost; the total cost above materials was $14.51 per net ton, or 38.7 per cent of mill cost. The mill cost was $37.50 per net ton, and total book cost $39.37 per net ton.

Book cost of black plate.—This commodity is similar to black sheets, but is subject to further treatment to make it suitable for tinning. The additional processes are pickling, annealing, and cold rolling. Pickling consists in putting the black sheets through an acid bath to remove impurities from the surface; annealing, in heating and cooling the metal slowly to make it pliable; and cold rolling, in giving it a final rolling to insure perfect smoothness and correctness in gauge. All of these processes involve considerable handling and labor, and also large expenses for materials and supplies.

The labor cost of black plate forms, therefore, a considerable item, and for the production shown in the foregoing table amounted to $14.19 per ton, or 30.3 per cent of the mill cost. The other items of cost above materials were $7.41 per ton, so that the total cost above materials was no less than $21.60 per ton, or 46.1 per cent of the mill cost. The mill cost was $46.85 per ton, and the total book cost $48.99 per ton.

BOOK COST OF TIN AND TERNE PLATE.—This product is sold and the cost is reckoned on the basis of a standard or base box which contains 100 pounds of tin plate. To compare the costs of tin plate with black plate, from which it is made, they should be multiplied by 22.4 to get both on a gross-ton basis. Apart from the black plate used, the most important item of expense is for pig tin. The labor cost in tinning is comparatively small.

For the production shown in the above table the average cost of the black plate was $2.04 per base box, and the pig tin $0.63 per base box. These two items are grouped together in the table for convenience in statement. While the black plate has a cost which, even for the least integrated companies, goes back to the cost of sheet bars and for most of the producing interests goes back to the cost of ore and coke, the pig tin is an imported article purchased in the world market and at prices which show considerable fluctuations.

The labor cost of tin plate for the production under consideration was $0.19 per base box, and formed 6.3 per cent of the mill cost. The total cost above materials was $0.37 per base box, or 12.2 per cent of the mill cost. The mill cost was $3.04 per base box, and the total book cost $3.18 per base box ($71.23 per gross ton).

Section 7. Character and significance of foregoing book cost statements.

The foregoing discussion covers the mill costs as shown on the books of the companies, and also shows the book costs by adding to the former the "additional costs" (general expense and depreciation) shown by the profit and loss statements. These book costs, however, if taken by themselves, form an imperfect basis for judging the cost of production. This is because, as already explained, there are large but very varying items of intermediate profit included in the price of the materials transferred from one stage of production to a succeeding stage.

The next and far more important step will be to show what these book costs become when intermediate transfer profits are eliminated. This further process could be carried out by the Bureau, however, only for ore, pig iron, and crude steel, and a very limited number of rolled products. For the other products shown above, therefore, the total book cost is a figure of distinctly limited value. The principal interest, indeed, of the foregoing cost statements for most of the finished products is found not in the book cost or even in the mill cost, but in the costs above materials, or, in other words, all items of mill cost except the material used. This is a much better standard of comparison than the *conversion cost,* which includes the cost of waste, because the cost of waste must be figured on the prices of the materials used—itself a fluctuating and, as has been shown, unreliable figure, often containing considerable items of antecedent profit. The costs above materials, on the other hand, are of great value and great interest.

CHAPTER IV.

METHODS OF ELIMINATING INTERMEDIATE TRANSFER PROFITS FROM BOOK COSTS.

Section 1. Two kinds of profits included in book costs.

The importance of eliminating intermediate profits included in the foregoing book costs has been repeatedly referred to. These intermediate profits are of two kinds—(1) transfer profits and (2) profits on transportation.

Transfer profits, as already made clear, are profits added by an integrated concern to the cost of an antecedent raw material—such as ore or coke, or a relatively crude material, as, for instance, pig iron, ingots, or billets—in transferring these materials from one subcompany to another or from one department to another.

Transportation profits are the profits from the transportation of ore used in making pig iron and steel. These are the only profits of this kind directly connected with the cost of production of iron and steel which can be determined with any degree of accuracy.

The elimination of these profits would present a somewhat different problem than in the case of transfer profits. Integration of the production of raw materials may be regarded as a normal condition in the steel industry at the present time. On the other hand, the integration of such production with the transportation agencies which serve them is exceptional. Railroads, apart from industrial switching facilities (and as distinguished from vessel fleets), could not, under most conditions of the industry, be provided for each integrated concern, no matter how large, without involving great waste of capital in investment and excessive costs of production. Hence, while the costs arrived at by eliminating transfer profits may be regarded as normal figures for successful modern companies, the elimination of transportation profits would tend rather to show the influence of an exceptional factor in the industry.

For these reasons the Bureau has revised the book costs at this point in one way only, namely, eliminating merely the intermediate transfer profits on materials passing from one stage of production to another. In Chapter VII the costs will be shown for the Steel Corporation alone for the year 1910, eliminating both transfer and transportation profits, as it is for this concern only that the transportation profits are of great significance in the cost of production.

It is desirable first to point out the scope of the cost data from which such profits are eliminated and then certain general rules followed in eliminating transfer profits.

Section 2. Extent of industry covered and distinction of large and small companies.

Limitation of discussion to Lake ore-using districts.—In making its revision of book cost data the Bureau has confined itself to concerns using almost exclusively Lake ores. At the present time the steel industry is practically based on Lake ores. The districts of production which, considering both volume of output and conditions of cost, most fairly represent the position of the United States as a whole are those which lie west of the Allegheny Mountains, north of the Ohio, and east of the Mississippi Rivers. This region includes such important districts as Pittsburgh, the Valleys, Lake Erie, Wheeling, southern Ohio, and Chicago.

While the limitation of the discussion of the revised costs to these particular districts necessitates the exclusion of considerable of the data presented in preceding book cost statements, nevertheless the cost data comprised in this study of revised costs embrace not only the bulk of those obtained by the Bureau, but also include a very substantial proportion of the total business of the United States for the period in question. This is clearly shown by the following table:

Table 8.—PRODUCTION OF SPECIFIED PRODUCTS COMPRISED IN BUREAU'S COMPUTATIONS OF REVISED COSTS AND PER CENT OF SAME TO TOTAL PRODUCTION IN THE UNITED STATES, 1902-1906.

Products.	Production.	Per cent of total for United States.
	Gross tons.	
Lake ore	106,268,728	73.3
Connellsville coke (net tons)	51,867,247	72.2
Total coke (net tons)	57,121,843	40.0
Bessemer pig iron	44,311,530	79.5
Basic pig iron	9,161,685	58.4
Bessemer billet ingots	29,099,783	91.6
Bessemer rail ingots	15,495,210	
Large Bessemer billets	17,151,389	(1)
Bessemer standard rails	10,618,799	77.1

[1] Probably about 90 per cent.

It is apparent, therefore, that these revised cost figures in most cases cover a very large proportion of the total production of the products specified. They include the total production of the Steel Corporation for these products. Moreover, they include all the Lake ore for which the Bureau received returns and practically all the Connellsville beehive coke included in the cost statements furnished for the period in question.

During the period 1902 to 1906 the only important companies furnishing cost statements which were outside of the districts above named, and which manufactured steel in important quantities, comprised two in the East and one in the Far West. One of the eastern companies used foreign ores chiefly, and, both on this account as well as on account of the difficulty of revising its costs on the basis planned, was naturally excluded from the computation. The other large eastern company was also excluded with respect to most products as being outside the region regarded as typical, although included for two important products.

The production of the Southern companies which furnished cost data was important only for ore, coke, and foundry pig iron. The costs of these products, as already shown above (see pp. 17, 19, and 22), were very nearly on a net basis, as shown by the books of account, and no important change would have resulted from revising them in the manner described above. Furthermore, it would have been quite improper to have combined them with the costs for the districts using Lake ore.

Owing to this difference in the extent of the industry between the costs covered by the cost statements hereafter to be given and the book costs for the country as a whole presented above (Chap. III), it was necessary, of course, to compute the book costs also for these Lake ore-using districts alone, in order that comparisons could be made between the revised costs and the proper book costs. For this reason the book costs for these districts, as shown in the next chapter, will differ slightly from those shown in Chapter III. The differences, however, are small and tend to show, as stated, that the costs for this particular region (Lake ore-using districts) are a fair basis for judging the position of the iron and steel industry in the United States.

Separation of large and small companies.—A very significant feature of the comparison of revised costs with book costs to be presented later is the distinction made between the average costs of large and small companies. There were, of course, great differences between the various reporting companies in the degree of integration, and hence in the extent to which intermediate profits from transfers figure in their cost statements. It was obviously desirable, therefore, to group such companies in order to show these differences clearly. Generally speaking, the large companies were best integrated; the exceptions to this condition were comparatively unimportant when the output was taken into consideration. For the large companies, furthermore, the production processes were more comprehensive, and the tonnages so much larger that they enjoyed, on the whole, considerable technical advantages with respect to the economy of operation. It was believed that these large concerns might fairly be regarded as the representative units of the industry for the purposes of this cost discussion.

The companies whose costs of production were uniformly combined in the cost averages for large companies, so far as they produced the several products, were (1) the United States Steel Corporation, (2) the Lackawanna Steel Co. (Buffalo plant), (3) the Jones & Laughlin Steel Co., and (4) the Republic Iron & Steel Co. (Northern plants). The costs of production of the Republic Iron & Steel Co. for its Southern plants were not included in this computation, nor certain minor plants of the Lackawanna Steel Co., situated east of the Allegheny Mountains. For two products the average for the large companies includes also the costs of the Cambria Steel Co., which is located at Johnstown, only about 80 miles east of Pittsburgh, but which is generally grouped with the eastern companies.

The smaller companies whose costs of production are comprised in the averages need not be specified in detail. The number included in the statement of average costs for particular products varied considerably. They include a few companies of intermediate size, as well as more numerous companies which are more accurately described as small.

To sum up, therefore, the revised cost data presented in this portion of the report comprehend the costs for all the companies in the Lake ore-using districts. These costs are, for purposes of comparison, shown in two ways—first, in the form of the book costs already discussed (these have been computed on the basis of the costs reported by the companies), and, second, the same costs excluding transfer profits. These costs will be shown separately for large and for small companies.

Section 3. Method of eliminating transfer profits.

The elimination of profits by the Bureau was based on information furnished by the companies themselves respecting the amount of such profits. The computations were of an elaborate and complicated character and can not be well explained in detail at this time; they will be set forth in detail in the full text of the report. It is important, however, to indicate in a very general manner the methods adopted for determining transfer profits and certain general rules which governed computations before stating these revised costs themselves.

In the first place, it should be noted that the whole process of computation was conducted separately for each company and was made according to the actual circumstances of its production and consumption of the several products, with amounts of cost and profit and not by the use of averages per ton.

The several companies reporting their costs also reported their sales and profits on sales, by products, some references to which (in averages per ton) have been made above. (See pp. 18, 20, and 25.) The profits by products which have been cited above were the profits remaining after the deduction of "additional costs," which have been already explained (p. 10). As the method of allocating such additional costs is necessarily somewhat arbitrary, it is important to note that there were no additional costs to be distributed in the case of ore and coke, and hence no adjustment to be made respecting the profits thereon. It was on these two products that almost all of the transfer profits which are to be deducted were received.

One rule followed was that for deducting the profit on sales as well as on transfers, in so far as the consumption of the product in question exceeded the quantity transferred. This rule can be made clear by a brief illustration. Suppose a company produced 100,000 tons of Bessemer pig iron in a year at an average cost of $12 per ton, and sold 35,000 tons from time to time at an average price of $14 per ton, or at $2 per ton profit. Suppose it consumed in its own steel works 65,000 tons of pig iron of its own production and 10,000 tons additional purchased in the open market at an average price of $15 per ton. The direct cost of the pig-iron tonnage consumed would therefore be 65,000 tons at $12 per ton, and 10,000 tons at $15 per ton, or a total of $930,000. Against this cost, according to the rule adopted by the Bureau, there was put the profit on so much of the tonnage sold as corresponded to the quantity purchased. In the above case the profit of $2 per ton on 10,000 tons of the total tonnage sold gives $20,000. The net cost of the pig iron consumed, therefore, was $910,000. Of course, not all the profit on sales was charged, but only the profit on a quantity equal to the quantity purchased. Such transactions of purchase and sale during a year are not uncommon. They are sometimes important for companies mining and consuming ore, where a variety of grades is desirable, so that the product of one mine is sold in order to buy that of another.

It should be noted, however, that even if no credit had been given for profit on such sales, the total results arrived at would not have shown any material difference.

Another rule was that of allocating the transfer profit for a given commodity which was used in the production of two or more commodities. In such cases the rule adopted was the obvious one, namely, to prorate the profits per ton according to the tonnage consumed.

A conspicuous difficulty occurred with respect to the question of the period during which a given profit was earned and the period of production against which it should be applied in the next succeeding stage. For the steel products here under consideration, namely, ingots, billets, and rails, this is a comparatively unimportant matter, as the pig iron and subsequent materials generally move day by day with little interruption from one stage of production to another. It is of great importance, however, with the ore going into pig iron, because ore shipments are not continuous throughout the year on account of the winter closing of Lake navigation. While this fact undoubtedly introduces considerable liability to error in comparing ore profits with pig-iron costs for any single year (due chiefly to considerable fluctuations in the *price* of ore), it is not a serious matter when the business of five consecutive years is averaged.

The difficulty suggested above was partly obviated also by carrying inventories forward into the consumption of the succeeding year. The computation of the average costs for five years combined, as well as for single years, was made more accurate by the application of this obviously correct rule.

The most difficult question presented in the computation of transfer profits was in distinguishing the rates of profit on Bessemer ores and on non-Bessemer ores. The profit statements furnished to the Bureau did not make this distinction. For some companies it was unnecessary, because they produced only one variety of ore. For certain other companies it was a matter of indifference, because they made only one kind of pig iron. But for companies which produced both Bessemer and non-Bessemer ores and which likewise produced both Bessemer and basic pig iron it was necessary to divide the known ore profit between the two grades of ores. The exact manner in which this was done is too complicated to be described in detail; but, in brief, it consisted in determining the average prices and profits on the ores from a comparison of the actual average prices and average costs of the ores for all ranges and grades with the official prices for the Bessemer and non-Bessemer ores for the Mesabi and Old Ranges. This required an allotment of tonnages by ranges and by grades, which in both cases involved some approximations, also certain adjustments to make tonnages shipped proportional to tonnages mined, and certain other adjustments for special sales below the market price, etc.[1]

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[1] The Bureau's methods and results in computing the approximate division of profit between Bessemer and non-Bessemer ores are partly indicated here and will be fully explained in the full report.

The actual average prices, profits, and costs for the sales and transfers of 109,424,041 tons of Lake ore during the five years 1902–1906 which were reported to the Bureau were as follows:

AVERAGE COSTS, PRICES, AND PROFITS ON LAKE ORE, PER GROSS TON, BY YEARS, 1902–1906.

Year.	Tonnage.	Cost per ton.	Price per ton.	Profit per ton.
1902	20,111,011	$2.77	$3.34	$0.57
1903	17,627,423	2.70	3.57	.87
1904	16,555,393	2.70	3.06	.36
1905	26,093,788	2.58	3.18	.60
1906	29,036,426	2.64	3.47	.83
1902–1906	109,424,041	2.67	3.33	.66

The final allocation of these prices, profits, and costs to the two grades of ore for the Mesabi and Old Ranges, respectively, the details of which will be shown in the full report, was as follows:

ACTUAL AVERAGE PRICES, COSTS, AND PROFITS ON SALES AND TRANSFERS OF ALL LAKE ORE, PER GROSS TON, REPORTED TO THE BUREAU, AND ESTIMATED DIVISION OF THE SAME FOR BESSEMER AND NON-BESSEMER ORES, BY YEARS, 1902–1906.

Year.	Grade.	Tons.	Cost.	Price.	Profit.
1902	Bessemer	13,000,000	$2.71	$3.53	$0.82
	Non-Bessemer	7,100,000	2.88	2.98	.10
	Total	20,100,000	2.77	3.34	.57
1903	Bessemer	11,700,000	2.64	3.77	1.13
	Non-Bessemer	5,900,000	2.81	3.17	.36
	Total	17,600,000	2.70	3.57	.87
1904	Bessemer	11,200,000	2.66	3.19	.53
	Non-Bessemer	5,300,000	2.82	2.80	[a] .02
	Total	16,500,000	2.70	3.06	.36
1905	Bessemer	17,200,000	2.54	3.32	.78
	Non-Bessemer	8,900,000	2.66	2.91	.25
	Total	26,100,000	2.58	3.18	.60
1906	Bessemer	19,100,000	2.59	3.59	1.00
	Non-Bessemer	9,900,000	2.71	3.22	.51
	Total	29,000,000	2.64	3.47	.83
1902–1906	Bessemer	72,200,000	2.62	3.48	.86
	Non-Bessemer	37,100,000	2.76	3.03	.27
	Total	109,300,000	2.67	3.33	.66

[a] Loss.

While the total average profits for each year were compiled from books of account, the profits for the two grades of ore are approximate and apply to the particular tonnages comprised in the above table.

The principal interest of this table lies in the fact that it was the basis for apportioning the profits on Bessemer and non-Bessemer ore for the Steel Corporation. Of course, the greater part of the tonnage shown in this table was that of the Steel Corporation. For the Steel Corporation alone, however, the average profits per ton in each year varied slightly from the averages shown above, and adjustments were made accordingly in the computations for that concern.

Separate treatment was made of ore sales and ore transfers in making [these adjustments on account of the marked differences in the average prices at which such sales and transfers were made.

As just noted, while in the determination of these profits on ore certain approximations were necessary, yet the average profit for both Bessemer and basic pig iron combined is a known amount derived from the records submitted by the companies. There is, moreover, no doubt that this allocation of the total profits as between Bessemer and basic iron is substantially correct.

Section 4. Principal products for which transfer profits were deducted.

The principal items of transfer profit were for ore and coke, and to a less extent for pig iron and certain minor raw materials, such as ferromanganese. The profits on all ore and coke entering the net metallic mixture and coke items, respectively, in the pig-iron cost sheets were deducted from the costs of these items, thus giving the net costs. In the cost of ingots these deductions appear again in the reduced cost of the pig iron and scrap along with any deductions on account of intermediate profits on pig iron, so far as they were applicable to the production of the ingots in question. Similar deductions were made from manganese costs on account of intermediate profits in the ferromanganese or other similar additions to the metal. As these deductions resulted in a revised cost for the ingots, they likewise affected in a similar manner the cost of ingots used in making rails and large billets.

CHAPTER V.

COMPARISON OF BOOK COSTS FOR 1902–1906 WITH COSTS AFTER ELIMINATION OF INTERMEDIATE TRANSFER PROFITS.

Section 1. Introductory.

Having made clear the general principles followed by the Bureau in determining the amount of transfer profits to be eliminated, it now remains to compare the costs computed in the two ways noted on page 6, namely, (1) book cost,[1] and (2) book cost less intermediate transfer profits. These costs are shown not only for all companies combined, but also, as far as practicable, grouped for large companies and small companies. For convenience and brevity the different forms of statement are presented side by side.[2]

Owing to the nature of the information, it was impracticable, as already stated, to carry such revision of costs beyond crude steel, except for two of the most important rolled products—Bessemer rails and large Bessemer billets.

Section 2. Comparison of costs for Lake ore.

The present section takes up ore costs for all the companies reporting, combined, and includes the Steel Corporation in those figures.

The costs of Lake ore require only one insignificant elimination, namely, a very small intermediate profit from intercompany royalty. That there are no intermediate transfer profits on materials is due, of course, to the fact that ore is an original raw material. There is, of course, a large and very important transportation profit in the carriage of ore, but accruing almost entirely to the Steel Corporation; on account of this circumstance, as already made clear, this profit is not to be eliminated in these comparisons of average costs for several companies, but the extent of it will be shown in detail at the end of this chapter, and will be taken up in Chapter VII, as already noted, in connection with the costs of the Steel Corporation alone for the year 1910.

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[1] Except for ore for which only a trifling deduction for intermediate profits was necessary.

[2] The costs which are shown in this chapter do not cover all the cost statements furnished to the Bureau as stated above (p. 38), but that part for the production of the chief Lake ore-using districts, which, however, comprised the great bulk of the production of the country. (See Table 8.) For some products, e. g., Lake ore and Bessemer billet ingots, it comprises the total tonnage reported to the Bureau.

TABLE 9.—AVERAGE BOOK COST PER GROSS TON OF LAKE ORE AT LOWER LAKE PORTS, EXCLUDING INTERCOMPANY ROYALTY, DISTINGUISHING LARGE AND SMALL COMPANIES, 1902-1906.

Items of cost.	All companies (106,268,728 tons).	Large companies (84,920,942 tons).	Small companies (21,347,786 tons).
Labor	$0.45	$0.44	$0.50
Other operating	.37	.38	.34
Royalty	.23	.23	.21
Mine cost	1.05	1.05	1.05
Rail freight	.67	.69	.58
Lake freight	.74	.74	.74
Lower Lake cost	2.46	2.48	2.37
General expense, depreciation, and taxes	.16	.16	.12
Total cost at lower Lake ports	2.62	2.64	2.49

The costs as shown in this table differ from the book costs shown above (p. 16) in two respects only. First, they distinguish all companies, and large and small companies, and, second, they show the costs after eliminating intercompany royalties. Inasmuch as the changes in costs on account of the elimination of intercompany royalties were very slight, it is unnecessary to show the book costs together with the same costs after eliminating such intercompany royalties. The intercompany royalties averaged only $0.02 per ton for all companies combined, and $0.03 for the large companies, while for the small companies there was no deduction on this account.

After making this small deduction, the average mine cost was the same for the three groups shown, namely, $1.05 per ton. There were, however, some differences in the various items for the different groups. Thus for the item of labor, which represents the direct labor cost only, the average for all companies was $0.45 per ton, as compared with $0.44 per ton for the large companies and $0.50 per ton for the small companies. The higher cost of labor for the small companies was largely offset, however, by lower costs for other operating expenses, namely, $0.34 for the small companies, as compared with $0.38 for the large companies. The small companies also showed a lower average royalty, even after the deduction of intercompany royalties, the average for the small companies being $0.21 per ton, as against a net average royalty of $0.23 for the large companies. A good many fee-ore mines (largely in the Marquette Range) were in the small-company group. These having, of course, no royalty, tended to reduce the average royalty cost of that group as a whole.

The small companies showed a lower average rail freight, principally due to the fact that no mines in the Vermilion Range were included among them, the average being $0.58 per ton, as against $0.69 for the large companies. On the other hand, their average

Lake freight charge happened to be just the same as for the large companies, namely, $0.74 per ton.

The small companies also had, on the average, smaller additional expenses for general administration, depreciation, and taxes, namely, $0.12 per ton, as compared with $0.16 for the large companies.

Consequently the small companies happened to have a lower average total cost at lower Lake ports, namely, $2.49 per ton, as compared with $2.64 for the large companies, a difference of $0.15 per ton. This advantage of the small companies was not due, however, to cheaper mining as such, but to different conditions with respect to royalty and freights. It should be distinctly understood that the small companies whose ore costs are shown here, for the most part, are not the same small companies for which the average costs of pig iron are given later.

These figures show the average costs of ore at lower Lake ports, but not, of course, at the furnace. While some of the consuming furnaces are located at lower Lake ports, the net costs of a particular furnace can not be figured from these averages.

For the average of all the furnaces using Lake ore, a considerable amount of rail freight has to be added because most of them are located at a considerable distance south of the Great Lakes.

As has been clearly explained above, these costs of ore at lower Lake ports do not contain any deduction on account of the large profits from the transportation of ore which are made by a few ore-producing interests, and, in fact, almost entirely by the Steel Corporation. The effect of such transportation profits on the net cost of ore at lower Lake ports is taken up, therefore, at the end of this chapter and also in another chapter (see Chap. VII), namely, in the discussion of the integration costs of the Steel Corporation for the year 1910.

Section 3. Comparison of costs of coke.

The coke produced by the companies which are considered in these computations of revised costs was of three kinds—(1) Connellsville coke, (2) Pocahontas coke, and (3) by-product coke. In none of these three was there any profit included in the coke costs themselves, on account of the transfer prices of coal, which could be excluded on the basis of data furnished the Bureau. (In the subsequent use of such coke in making pig iron, however, there was a considerable transfer profit, as noted on p. 50.) Furthermore, with respect to the differences between large and small companies, it should be noted that practically all the Connellsville coke (beehive) for which the Bureau had returns was made by the large companies, and likewise all the by-product coke. As to Pocahontas coke, it was not practicable to show the cost of large and small companies separately. Taking all the coke production of the companies here under consideration, it would be possible, however, to distinguish the costs of the large companies from the costs of the small companies, but there would be little utility in presenting the figures because averages of the items of coke cost for districts working under such different conditions would have almost no significance. It is sufficient, therefore, to note that the average cost of coke at the oven for all the companies here under consideration was $1.49 per net ton. The average costs at the oven for all companies, for the several kinds of coke, for the five-year period 1902 to 1906, were as follows:

	Per net ton.
Connellsville (51, 867, 247 tons)	$1. 43
Pocahontas (4, 170, 396 tons)	1. 74
By-product (1, 084, 200 tons)	3. 43
Average	1. 49

For most of this coke a considerable freight has to be paid to get the coke to the blast furnace; i. e., for all coke except the by-product coke.

For the Connellsville coke and the Pocahontas coke, these average costs are the same as for the total production already given, although the tonnage in the case of the former is not quite so large (p. 18). For the by-product coke, the average costs here shown are considerably higher than for the average costs of all by-product coke reported to the Bureau, which is shown elsewhere (p. 19). The details as to differences in items are not of any special importance.

Section 4. Comparison of costs of Bessemer pig iron.

The book costs of Bessemer pig iron are compared with the costs after the elimination of intermediate transfer profits on ore and coke. The costs of the large and small companies are distinguished in each case. They are for the Lake ore-using districts only. (See p. 38.)

TABLE 10.—AVERAGE BOOK COST PER GROSS TON OF BESSEMER PIG IRON AND COST EXCLUDING TRANSFER PROFITS, DISTINGUISHING LARGE AND SMALL COMPANIES, 1902–1906.

Items of cost.	All companies (44,311,530 tons).		Large companies (40, 873, 250 tons).		Small companies (3, 438, 280 tons).	
	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.
Net metallic mixture	$7. 36	$6. 10	$7. 38	$6. 01	$7. 20	$7. 14
Coke	3. 81	3. 28	3. 75	3. 19	4. 41	4. 41
Limestone	. 43	. 43	. 43	. 43	. 49	. 49
Labor	. 73	. 73	. 69	. 69	1. 26	1. 26
Other operating	. 80	. 80	. 79	. 79	. 82	. 82
Furnace cost	13. 13	11. 34	13. 04	11. 11	14. 18	14. 12
Additional costs	. 76	. 76	. 82	. 82	. 09	. 09
Total cost	13. 89	12. 10	13. 86	11. 93	14. 27	14. 21

COMPARISON OF BOOK COSTS.—The table shows that the average Bessemer pig-iron costs of the large companies even before the elimination of antecedent transfer profits were distinctly lower than those of the small companies, the furnace costs being, respectively, $13.04 and $14.18 per ton, giving an advantage for the large companies of $1.14 per ton. The chief differences between the furnace costs of the large and small companies are found in the costs of ore, coke, and labor. The ore cost of the large companies was indeed higher, being booked at $7.38, or $0.18 higher than that of the small companies, $7.20 per ton; the difference was chiefly due to location of furnaces. As stated above (p. 47), the small companies for which the costs of pig iron are shown here are not, generally speaking, the same small companies for which average costs of ore were shown above. The disadvantage of the large companies in respect to book cost of ore was more than offset in the book cost of coke. The large companies, with an average book cost of coke of $3.75 per ton, had an advantage of $0.66 per ton over the small companies ($4.41). In this case also location was the chief factor.

The net advantage of location with respect to these two materials may be roughly estimated, therefore, at $0.48 for the large companies.

The chief advantage of the large companies was, however, in the labor cost, namely, $0.69 per ton, as compared with $1.26 for the small companies—a difference of $0.57 per ton. This was due chiefly to differences in efficiency of plants, volume of production, etc., and was perhaps partly the natural result of a larger investment of capital per ton of product. Of course, even where the investment is not greater in proportion to output, it is generally possible to have a more efficient equipment with large tonnages of product than with small ones.

The other items of furnace cost noted in the foregoing table did not show any marked differences between large and small companies.

As already stated elsewhere (p. 24), the "additional costs" probably were not made on a comparable basis, those for the large companies being, on the average, undoubtedly too high, and those for the small companies probably being too low. Such "additional costs" for the large companies might be expected to run higher, especially on account of more elaborate technical organization and equipment intended to reduce operating costs. A more detailed statement of these additional costs follows:

Items.	Large companies.	Small companies.
General and miscellaneous expense	$0.40	
Depreciation	.42	$0.09
Total	.82	.09

The general and miscellaneous expenses were considerable for the large companies, partly on account of their more complicated organization. Some costs comprehended therein were probably put by the smaller companies in their furnace costs, although this probably was not the case to any great extent. It is very plain, however, that the large companies made very heavy charges for depreciation as compared with the small companies. Some difference in this respect may have been necessary, owing to the more elaborate equipment of the large companies; but it must be remembered that this depreciation is reckoned per ton of product, and more elaborate equipment tends to facilitate larger tonnages. In other words, more extensive plant investment is not synonymous with greater investment per ton of product, or with greater depreciation per ton of product. For depreciation alone, however, $0.40 per ton is regarded as ample, while general expenses properly chargeable to blast furnaces are undoubtedly small for steel-making companies.

Bearing these facts in mind, the total book costs of large and small companies shown in the foregoing table may be noted, namely, $13.86 per ton of pig iron for large companies and $14.27 for small companies, giving a difference of $0.41 per ton in favor of the former.

If instead of these additional costs an assumed normal allowance for such costs (see p. 24), namely, $0.50 per ton, be added, the total book costs would be $13.54 for the large companies and $14.68 for the small companies—a difference of $1.14 per ton.

COMPARISON OF COSTS OF ALL COMPANIES AFTER ELIMINATION OF INTERMEDIATE TRANSFER PROFITS.—There were great differences between the average book costs of all the companies combined and these costs after eliminating antecedent profits from transfers of materials. These differences were far greater for large companies than for small companies.

The only items of cost which are changed by the revision are for net metallic mixture and coke. As shown on the books, the average cost of the net metallic mixture for all companies was $7.36 per ton of pig iron. The elimination of transfer profits reduced this, however, to $6.10 per ton, a difference of $1.26 per ton. This corresponds to a transfer profit on the ore consumed of approximately $0.70 per ton, about 1.8 tons of ore being used on the average to produce a ton of Bessemer pig iron.

The transfer profits eliminated from the cost of coke reduced the book cost for all companies from $3.81 per ton of pig iron to a cost of $3.28 per ton, a reduction of $0.53 per ton. A little more than a net ton of coke was used on the average for a ton of pig iron, and the transfer profit was about $0.46 per net ton of coke used.

On account of these differences in particular items the total furnace costs necessarily differed greatly. The average furnace cost for all companies, as shown on the books, was $13.13 per ton of pig iron, as against $11.34 per ton, after taking out the transfer profits. Corresponding differences existed for the total costs before and after such revisions. Thus the total book cost was $13.89 per ton of pig iron; or, less transfer profits, $12.10 per ton.

It should be distinctly borne in mind, of course, that as these differences were due to the elimination of profits derived from preceding stages of production, it is logical that the costs should be lower in order that there may be a larger margin of profit to furnish a return to the larger investment involved.

COMPARISON OF COSTS OF LARGE AND SMALL COMPANIES AFTER EXCLUDING INTERMEDIATE TRANSFER PROFITS.—The great reductions in cost which are shown above were more characteristic of the large companies than of the small companies, because the former, generally speaking, were more completely integrated, and consequently earned larger profits from antecedent stages of production.

Thus, while the large companies showed higher book costs for net metallic mixture than the small companies, the cost of this item, after eliminating the transfer profits, was very much lower for them, namely, $6.01 per ton of pig iron, as against $7.14 per ton. The small companies, on the average, showed very little profit on this account—only $0.06 per ton, as against $1.37 for the large companies.

In the case of coke there was no intermediate transfer profit for the small companies, while that for the large companies averaged $0.56 per ton.

Consequently the average furnace cost after the elimination of transfer profits showed $11.11 per ton for the large companies, as compared with $14.12 per ton for the small companies.

These marked differences in furnace costs are somewhat diminished, when the total costs are compared, on account of the greater "additional costs" of the large companies. (See p. 10.) Eliminating transfer profits, the total cost for the large companies was $11.93 per ton, as compared with $14.21 for the small companies, a difference of $2.28 per ton.

If the additional costs were taken as equal for each group of companies at $0.50 per ton (see p. 24), the difference would have been $3.01.

While in this revision of book costs the Bureau is not attempting to eliminate any profits except those from the transfers of materials, it should be remembered that if transportation profits on ore (see p. 70) were also eliminated the reduction in the cost of pig iron resulting therefrom would have been much greater, of course, than in the case of ore, inasmuch as about 1.8 tons of ore are required to make a ton of Bessemer pig iron. The same would be true also in the case of other kinds of pig iron. Moreover, for steel products made from pig iron there would be a still larger deduction on account of the larger quantities of ore required per ton of product. This general fact is noted here and need not be repeated in discussing the costs of other kinds of pig iron or for steel products made therefrom.

Section 5. Comparison of costs of basic pig iron.

The book costs of basic pig iron in the Lake ore-using districts (see p. 38) are likewise compared with the costs after the elimination of intermediate transfer profits on ore and coke. The costs of the large and small companies are likewise distinguished in each case.

TABLE 11.—AVERAGE BOOK COST PER GROSS TON OF BASIC PIG IRON AND COST EXCLUDING TRANSFER PROFITS, DISTINGUISHING LARGE AND SMALL COMPANIES, 1902–1906.

Items of cost.	All companies (9,161,685 tons).		Large companies (8,466,492 tons).		Small companies (695,193 tons).	
	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.
Net metallic mixture	$7.15	$6.69	$7.17	$6.69	$6.90	$6.68
Coke	3.32	2.79	3.26	2.68	4.11	4.11
Limestone	.47	.47	.46	.46	.64	.64
Labor	.60	.60	.57	.57	1.06	1.06
Other operating	.75	.75	.71	.71	1.10	1.10
Furnace cost	12.29	11.30	12.17	11.11	13.81	13.59
Additional costs	.52	.52	.54	.54	.31	.31
Total cost	12.81	11.82	12.71	11.65	14.12	13.90

COMPARISON OF BOOK COSTS.—The average costs of basic pig iron for large companies, even before the elimination of antecedent transfer profits, were distinctly lower than those of small companies,[1] the furnace costs being, respectively, $12.17 and $13.81 per ton, giving an advantage for the large companies of $1.64 per ton. Considerable differences appear in the costs of each item shown.

The ore cost of the large companies as shown in the above table exceeded that of the small companies by $0.27 per ton. For coke, however, the book costs were considerably lower for the large companies, namely, $0.85 less per ton. The large companies had also an advantage in the cost of limestone, which on the average amounted to $0.18 per ton. Location of furnaces was undoubtedly the principal factor in these differences in cost of ore, coke, and limestone. Other reasons have already been made clear.

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[1] The small companies whose pig-iron costs are shown here are by no means identical with those whose ore costs are shown in Table 9.

The large companies had a labor cost of only $0.57 per ton, as against $1.06 for the small companies, showing a difference of $0.49 per ton. This was due chiefly to differences in efficiency of plants, volume of production, and to some extent perhaps involved larger investments per ton of product. Likewise for other operating costs the large companies enjoyed a distinct advantage, amounting to no less than $0.39 per ton. Over half of this difference was due to the cost of steam, the details not being given in the foregoing table.

The large companies had greater additional costs allotted to basic pig iron which tended to diminish their advantage in total costs over the small companies. These additional costs, stated in more detail, were as follows:

Items.	Large companies.	Small companies.
General and miscellaneous expense	$0.28	$0.15
Depreciation	.26	.16
Total	.54	.31

The differences in these items for the large and the small companies were not nearly as conspicuous for basic pig iron as for Bessemer pig iron, and consequently the comments made with respect to the latter (p. 50) would apply only in a slight degree in this case.

The total book costs for basic pig iron showed an average of $12.71 per ton for the large companies and $14.12 for the small companies, giving a difference of $1.41 per ton.

If an assumed normal additional cost of $0.50 per ton were used instead, the total cost for the large companies would be $12.67 per ton, as against $14.31 for the small companies—a difference of $1.64.

COMPARISON OF COSTS OF ALL COMPANIES AFTER ELIMINATION OF INTERMEDIATE TRANSFER PROFITS.—Although the antecedent profits involved in the book costs of basic pig iron were not as large as for Bessemer, there were, nevertheless, great differences between the book costs and these costs after eliminating the profits on transfers of materials. These differences were much more marked also for large companies than for small companies.

In basic pig iron, as in Bessemer pig iron, the only items of cost which were changed by these eliminations were the items for net metallic mixture and coke. Taking first the average for all companies, the book cost of the net metallic mixture was $7.15 per ton of pig iron, and eliminating the transfer profits on ore this was reduced to $6.69 per ton, a difference of $0.46 per ton. Taken on a ton of ore.

this would amount to about $0.23 per ton. The profits on the non-Bessemer ore used in making basic pig iron are much lower than for Bessemer ore, inasmuch as the prices are much lower, while the costs of non-Bessemer ore averaged a little higher.

For coke the average book cost for all companies was $3.32 per ton of pig iron, and this cost less transfer profit was $2.79 per ton, giving a difference of $0.53 per ton. Figured per net ton of coke used, this would be about $0.46 per ton.

On account of these eliminations of antecedent profits, there were marked differences in the average furnace costs of basic pig iron. Thus, against the book furnace cost of $12.29 per ton for all companies, the elimination of transfer profits gave $11.30 per ton, showing a difference of $0.99 per ton.

Corresponding differences existed in the total costs before and after such eliminations, the average total costs per ton being, respectively, $12.81 and $11.82.

As stated before (p. 51), these transfer profits applied to productive activities in prior stages of production, and hence the margins between cost and price should be greater after such eliminations, in order to furnish any return on the investment in such prior productive enterprises.

COMPARISON OF REVISED COSTS FOR LARGE AND SMALL COMPANIES.—The costs of the net metallic mixture for the large companies ($7.17 per ton), as shown on the cost sheets, averaged higher than for the small companies ($6.90), as already shown (p. 52), but after the transfer profits on ore were eliminated in each case these costs were practically the same for these two groups, namely, $6.69 per ton of pig iron and $6.68 per ton, respectively.

The coke cost of the large companies was reduced by the elimination of transfer profits from $3.26 per ton of pig iron to $2.68 per ton, or $0.58 per ton, while for small companies it was not reduced at all.

Consequently the average furnace cost after the elimination of transfer profits showed $11.11 per ton for the large companies, as compared with $13.59 per ton for the small companies, giving a difference of $2.48 per ton.

Owing to the fact that the additional costs of the large companies were considerably larger than for the small companies, the revised total costs did not differ so greatly as the revised furnace costs. Thus, eliminating transfer profits, the total cost for the large companies was $11.65 per ton, as against $13.90 for the small companies, giving a difference of $2.25 per ton.

If the additional cost were assumed to be $0.50 in each case (see p. 24), the difference in the costs of large and small companies would have been $2.48.

Section 6. Comparison of costs for Bessemer and basic pig iron combined.

For ordinary cost statements, at least according to the forms of accounting usually followed, a combination of Bessemer and basic pig-iron costs would be of little value. This is due, of course, to the fact that the ores used are customarily charged at market prices, and that the prices for the two grades of ore used in making these kinds of pig iron are widely different.

For the present purpose, however, two reasons appear for combining the costs of Bessemer and basic pig iron. In the first place, the method of distinguishing the profit on Bessemer and non-Bessemer ores (see p. 42) was only approximate. The results obtained are believed to have been close enough to the actual facts, so that the difference was of no practical importance. Even in strict accounting statements there are many approximations which contain probability of greater variations than in this case. Nevertheless, a result arrived at by such a method is not always satisfactory and sometimes not so convincing as one which is based on the use of a definite amount of profit. Evidently by combining the total amounts of cost of Bessemer and basic pig iron and eliminating all the ore profits from this cost, any possible objections to the Bureau's approximate method of dividing the ore profits are completely avoided.[1]

In the second place, it should be noted that a combination of Bessemer and basic pig-iron costs, while comparatively meaningless when the ores are put in at market prices, is not so when the ores are put in at cost, or at figures approximating cost.

The revised averages do not, of course, give a furnace cost for ore which is an absolute cost of production, plus freight, to the furnace, because a good many concerns had to purchase a part of their ore and some of the smaller ones all of it. For the large companies the revised cost of the ore (net metallic mixture) found by eliminating transfer profit is very nearly the cost of the ore at the furnace, including full transportation charges.

Hence, while the costs of both Bessemer and basic pig iron combined are shown in the table below in the same form as above, the results which are of interest are comparatively limited, and may be more briefly described. These costs are for the Lake ore-using districts only. (See p. 38.)

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[1] A slight exception must be made to this statement of the process with respect to the small and practically negligible estimated amounts of profit on both Bessemer and non-Bessemer ores credited by the Bureau to the costs of ore used in basic open-hearth furnaces, and in very small tonnages of miscellaneous pig iron, such as foundry and malleable Bessemer.

TABLE 12.—AVERAGE BOOK COST PER GROSS TON OF BESSEMER AND BASIC PIG IRON COMBINED AND COST EXCLUDING TRANSFER PROFITS, DISTINGUISHING LARGE AND SMALL COMPANIES, 1902–1906.

Items of cost.	All companies (53,473,215 tons).		Large companies (49,339,742 tons).		Small companies (4,133,473 tons).	
	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.
Net metallic mixture	$7.33	$6.20	$7.34	$6.13	$7.15	$7.06
Coke	3.72	3.20	3.67	3.10	4.36	4.36
Limestone	.44	.44	.43	.43	.52	.52
Labor	.71	.71	.67	.67	1.22	1.22
Other operating	.79	.79	.78	.78	.87	.87
Furnace cost	12.99	11.34	12.89	11.11	14.12	14.03
Additional costs	.72	.72	.77	.77	.13	.13
Total cost	13.71	12.06	13.66	11.88	14.25	14.16

An inspection of this table shows at once that in this combined pig-iron cost the elimination of transfer profits had practically no effect on the small companies. Inasmuch as the revised costs for all companies for Bessemer and basic separately have already been discussed in detail, it will be sufficient to consider here the results for large companies only.

For the large companies the average book cost of the net metallic mixture was $7.34 per ton, but the elimination of the transfer profits reduced it to $6.13 per ton. This latter figure may be compared with $6.01 for Bessemer pig iron and $6.69 for basic pig iron for this item for this group of large companies. The reason why the net cost of this item was higher for basic than for Bessemer was due chiefly to differences in the locations of the groups of furnaces making these two kinds of iron, though also to the different amounts of profit in the ore which were eliminated from the book prices.

The cost of coke, after eliminating transfer profits, for Bessemer and basic pig iron combined, for the large companies, was $3.10 per ton of pig iron, as compared with a book cost of $3.67, showing a difference of $0.57 per ton of pig iron and indicating a profit of about $0.50 per net ton of coke. This net cost may be compared with $3.19 per ton of coke for Bessemer and $2.68 for basic furnaces. The net cost for the basic furnaces was lower, chiefly on account of lower freight charges.

The other items of furnace cost for Bessemer and basic pig iron combined, for the large companies, did not undergo any change through the elimination of profits, while the costs per ton for the several items were nearly the same as for Bessemer pig iron, on account of the preponderance of tonnage for that grade.

The furnace cost for both grades of iron combined, for the large companies, after eliminating transfer profits, was $11.11 per ton. It happens that this was also the furnace cost of both Bessemer and basic separately after the elimination of transfer profits. If the additional costs are taken into consideration, however, the combined cost becomes $11.88 per ton, as against $11.93 for Bessemer and $11.65 for basic. This combined total cost of Bessemer and basic pig iron, for the large companies, excluding these transfer profits, namely, $11.88, may be regarded as coming close to a normal net cost of pig iron for large integrated companies during the period 1902 to 1906.

It should be repeated, however, that a concern with exceptional transportation facilities, such as the Steel Corporation, would have a much lower integration cost if transportation profits were eliminated, as well as transfer profits.

Section 7. Comparison of costs of Bessemer billet ingots.

The great bulk of the steel made during the period 1902 to 1906, inclusive, was made by the Bessemer process. This steel may be divided into two kinds, namely, billet (or soft) steel and rail steel. The former is covered by the term "Bessemer billet ingots." The production included is the same as that shown in Table 6. The costs of this steel, before and after the elimination of antecedent profits from transfers of materials, showing the costs of large and small companies, are given in the following table:

TABLE 13.—AVERAGE BOOK COST PER GROSS TON OF BESSEMER BILLET INGOTS AND COST EXCLUDING TRANSFER PROFITS, DISTINGUISHING LARGE AND SMALL COMPANIES, 1902–1906.

Items of cost.	All companies (29,099,783 tons).		Large companies (27,519,174 tons).		Small companies (1,580,609 tons).	
	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.
Pig iron and scrap	$14.88	$12.84	$14.73	$12.62	$17.53	$16.67
Manganese	.31	.28	.31	.28	.37	.37
Fuel	.24	.22	.23	.20	.46	.46
Labor	.57	.57	.55	.55	.89	.89
Other operating	.64	.64	.63	.63	.71	.71
Works cost	16.64	14.55	16.45	14.28	19.96	19.10
Additional costs	.92	.92	.98	.98	.02	.02
Total cost	17.56	15.47	17.43	15.26	19.98	19.12

COMPARISON OF BOOK COSTS.—There were marked differences in the costs of the large and small companies as shown by the books of account. Thus the average book cost of ingots at the steel works for all companies was $16.64 per ton; for large companies it was $16.45 per ton; and for small companies $19.96 per ton, or $3.51 per ton higher than for large companies. This difference was due chiefly to the higher cost of the metal used, but also in part to higher costs for other items.

The book cost of the pig iron and scrap used was $14.73 per ton of steel for the large companies and $17.53 for the small companies, giving a difference of $2.80 per ton in favor of the large companies. A part of this difference was due to the fact that the small concerns which used their own pig iron had higher furnace costs; a part was due to the fact that the small companies had to purchase a much greater proportion of the pig iron used than the large companies, and this involved, of course, paying market prices and freights to the steel works for it instead of furnace costs. The large companies had very little expense on these accounts, as they purchased a comparatively small proportion of their pig iron during this five-year period. Nevertheless, they purchased some, and this tended to increase the average cost of their pig iron and scrap used.

For the same reasons the book cost of manganese was higher for the small companies than for the large companies, namely, $0.37 per ton of steel, as against $0.31.

The small companies were also at a disadvantage with respect to the cost of fuel—i. e., coke used in remelting cold pig iron and scrap in cupola furnaces—this book cost of fuel per ton of steel being $0.46 for them, as against $0.23 for the large companies. This shows clearly, of course, not only the much greater use of cold metal, but also indirectly confirms the statement that a larger proportion of the pig iron and scrap used by small companies was purchased.

Labor costs of the small companies were also higher, their average being $0.89 per ton of steel, as compared with $0.55 for the large companies. This was partly due to their less efficient equipment in labor-saving devices, smaller volume of production, etc., but probably more particularly to the fact that they bought a greater proportion of pig iron and scrap, so that a greater expense for labor in remelting the metal at the cupola furnaces was involved.

The fact that other operating expenses were higher for the small companies than for the large companies was chiefly due to the same reasons just given with respect to labor cost. These were $0.71 per ton for the small companies, as against $0.63 for the large companies.

The greater works cost of the small companies, as shown on the books, was partly offset by lower additional expenses. The allocations as made from the profit and loss statements were only $0.02 per ton of steel for the small companies, as against $0.98 for the large companies. In more detail these were as follows:

Items.	Large companies.	Small companies.
General and miscellaneous expense	$0.49	....
Depreciation	.49	$0.02
Total	.98	.02

The reasons for the differences and the criticism of them are substantially the same as for Bessemer pig iron (p. 50), and need not be repeated here. The cumulative character of these additional costs, due to the usual system of charging the pig iron to the steel works at furnace cost, without respect to the additional costs shown by the Bureau, has already been explained elsewhere (p. 29). Of course, in comparing these additional costs due allowance must be made for the fact that the group of small companies varies considerably for each product. This explains why the additional cost for these ingots for small companies is less than the additional costs for Bessemer pig iron for small companies.

The total book costs of the large companies and of small companies per ton of steel were $17.43 and $19.98, respectively, showing a difference of $2.55 per ton.

Instead of using the foregoing additional costs, an assumed normal cost for general expense and general depreciation for Bessemer steel works may be used, including, of course, the cumulative cost of pig iron on the same basis (see p. 29), namely, $0.60 per ton. In that case the total cost for the large companies would be $17.05 and for the small companies $20.56 per ton—a difference of $3.51.

COMPARISON OF COSTS AFTER ELIMINATION OF INTERMEDIATE TRANSFER PROFITS.—The elimination of antecedent profits on transfers of materials used greatly reduced the costs of these Bessemer billet ingots for all companies combined, these effects being, of course, much more conspicuous for the large companies than for the small companies.

The only items of cost affected by such eliminations were pig iron and scrap, manganese, and fuel (coke).

The book costs for all companies showed a cost for pig iron and scrap of $14.88 per ton. The elimination of transfer profits made the cost $12.84, or $2.04 per ton lower. This transfer profit combines, of course, all transfer profits in the ore and coke used in the pig iron, as well as any profit on the transfer of the pig iron itself. Generally speaking, however, the pig iron was not transferred at a profit, so that this factor was of very slight importance.

The profits in manganese relate to the same sources as for pig iron, being small quantities of profit on account of ore and coke used in making ferromanganese and spiegeleisen, as well as for transfer profits for this material itself. Eliminating the transfer profits, the average manganese cost for all companies was reduced from $0.31 per ton of steel to $0.28 per ton.

The profits eliminated from the cost of fuel relate to the transfer profits on the coke used in the cupola furnaces. The quantity of coke required for this purpose is very small per ton of steel produced. The transfer profits on such coke resulted in reducing this fuel cost from $0.24 per ton of steel to $0.22 per ton for the average of all companies.

The total book cost for all companies, including additional costs, was $17.56 per ton; the elimination of transfer profits reduced this to $15.47 per ton. The reduction from book cost was therefore $2.09 per ton.

The fact that these reductions were greater than those for pig iron is due chiefly to the fact that more than 1 ton of pig iron and scrap is required to produce a ton of steel, on account of waste in conversion. As repeatedly shown, these profits go back chiefly to the raw materials. The amount of transfer profit on pig iron as such was of very little significance against the total tonnage used.

It should be repeated here that the elimination of these antecedent profits, while it reduces cost and tends to show a greater margin between cost and price, makes it necessary, on the other hand, to take account of the fact that the investment in several prior stages of production must be covered by whatever margin of profit may result therefrom.

The profits eliminated from the cost of Bessemer billet ingots had reference chiefly to the large companies. The only item of cost of the small companies which was affected by these profit eliminations was pig iron and scrap. The whole discussion of the revised costs of the small companies may be dismissed, therefore, with the simple comment that the cost of the pig iron and scrap was reduced from $17.53 per ton of ingots to $16.67 per ton, giving a difference of $0.86 per ton. An equal difference naturally resulted in the revised works costs and revised total costs of the small companies with respect to this product.

For the large companies, the elimination of transfer profits reduced the cost of the pig iron and scrap from $14.73 per ton of steel to $12.62 per ton, giving a difference of $2.11 per ton.

The change in the cost of manganese due to the elimination of transfer profits was $0.03, and revised manganese costs appear, therefore, at $0.28 per ton.

The only other change in the items of cost resulting from the elimination of antecedent transfer profits was for profits included in the book cost of fuel—i. e., cupola coke. The average book cost per ton for the large companies was $0.23, which was reduced to $0.20 per ton by the elimination of transfer profit on the cupola coke.

In consequence of the changes in these three items, the works cost of Bessemer billet ingots for the large companies was reduced from a book figure of $16.45 per ton to $14.28 per ton. The elimination of the transfer profits thus reduced the book cost by $2.17 per ton. Corresponding reductions resulted, of course, in the total costs of the large companies, which were $17.43 and $15.26 per ton, respectively.

The difference in total cost (excluding transfer profits) between large and small companies, as shown by the foregoing table, was $3.86. If an assumed normal charge for additional general expense and depreciation ($0.60) were added to the works cost of the large and small companies, the difference after eliminating transfer profits would have been $4.82 per ton.

Section 8. Comparison of costs of Bessemer rail ingots.

Bessemer rail ingots are practically the same as Bessemer billet ingots, except that the steel is hardened by the use of a larger proportion of manganese, which tends to increase the cost slightly. While all the products considered in this chapter were produced in the same districts, and by the same companies (so far as each produced the products under consideration), a slight variation from this rule is found in the case of Bessemer rail ingots and rails (cf. p. 40), by the inclusion of another company in this case. This does not introduce, however, any disturbing elements of substantial importance.

The following table gives the costs of Bessemer rail ingots both before and after the elimination of antecedent profits from transfers of materials. As all the companies making rail steel were large concerns, only one group is presented in the table.

TABLE 14.—AVERAGE BOOK COST PER GROSS TON OF BESSEMER RAIL INGOTS AND COST EXCLUDING TRANSFER PROFITS, FOR ALL COMPANIES, 1902–1906.

[15,495,210 tons.]

Items of cost.	Book cost.	Excluding transfer profits.
Pig iron and scrap	$14.45	$12.70
Manganese	.80	.73
Fuel	.15	.13
Labor	.55	.55
Other operating	.59	.59
Works cost	16.54	14.70
Additional costs	1.05	1.05
Total cost	17.59	15.75

The only items in the cost of Bessemer rail ingots affected by the elimination of antecedent profits from transfers were pig iron and scrap, manganese, and fuel (cupola coke).

The book cost of pig iron and scrap was $14.45 per ton of ingots, as compared with $12.70 per ton after the elimination of transfer profits. The character of these transfer profits has been already explained above in connection with Bessemer billet ingots (p. 59).

The book cost of the manganese was $0.80 per ton, which was reduced to $0.73 per ton by the elimination of transfer profits. These profits go back to the ore and coke, as already stated (p. 60).

The transfer profits eliminated from the item of fuel relate to coke used in the cupolas; the book cost of fuel was reduced thereby from $0.15 to $0.13 per ton of ingots.

In consequence of these changes in the items of cost, the works cost was reduced from $16.54 per ton, as shown by the books, to $14.70.

The additional costs for Bessemer rail ingots, which averaged $1.05 per ton, consisted of $0.51 for general and miscellaneous expenses and $0.54 for depreciation. They brought the total book cost up to $17.59 per ton; which, after deducting transfer profits, became $15.75 per ton.

These additional costs show probably about a normal figure for depreciation (including cumulative additions for pig iron additional costs), but they are altogether too high for general expenses. A normal figure for the two combined is estimated at $0.60 per ton. This would make the total book cost $17.14, and the same less transfer profits, $15.30.

As stated in previous cases where book costs and these revised costs were compared, the reduction of the book costs by eliminating antecedent profits, while increasing the margin of profit between cost and price, also makes it necessary to take into account the investment in a greater number of stages of production.

Section 9. Comparison of costs of large Bessemer billets.

For the districts which are here under consideration (p. 38), about two-thirds of the output of Bessemer billet ingots was used in making large Bessemer billets. These were the most important single rolled product, not only of Bessemer steel, but of any kind whatever, during the period under consideration. In rolling them from ingots they pass through an intermediate stage in the form of blooms, for which costs are sometimes kept separately. Billets are a semifinished or partly rolled product, which are used either immediately or finally in making a great variety of steel commodities, such as some of the structural material, merchant bar, wire rods, etc. Rails and plates, and to some extent structural material, are not rolled from billets, but either directly from ingots or from blooms (in the case of rails and structural material) or slabs (in the case of plates). In the present cost statements for billets the costs for the blooming mill are combined with the costs for the billet mill, giving the cost of converting ingots into large billets.

The costs of large Bessemer billets both before and after the elimination of antecedent profits from transfers of materials, and distinguishing the costs of large and small companies, are given in the following table:

TABLE 15.—AVERAGE BOOK COST PER GROSS TON OF LARGE BESSEMER BILLETS AND COST EXCLUDING TRANSFER PROFITS, DISTINGUISHING LARGE AND SMALL COMPANIES, 1902-1906.

Items of cost.	All companies (17,151,389 tons).		Large companies (15,722,275 tons).		Small companies (1,429,114 tons).	
	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.
Ingots	$17.67	$15.46	$17.38	$15.05	$20.91	$20.06
Labor	.53	.53	.51	.51	.76	.76
Other operating	.81	.81	.80	.80	.84	.84
Mill cost	19.01	16.80	18.69	16.36	22.51	21.66
Additional costs	1.10	1.10	1.20	1.20	.03	.03
Total cost	20.11	17.90	19.89	17.56	22.54	21.69

COMPARISON OF BOOK COSTS.—Comparison may be made first of the differences between the average book costs for all companies with those for large and small companies. The average mill cost of large Bessemer billets, as shown by the books, was $19.01 per ton for all companies and $18.69 and $22.51, respectively, for the large and small companies. Thus the average mill cost of the large companies was $0.32 per ton lower than the average for all, while the average mill cost for the small companies was $3.50 per ton higher. The much higher mill costs of the small companies were due chiefly to a great difference in the average cost of the ingots used, and also to a small extent to higher labor costs.

The average book cost of ingots used was $17.67 per ton for all companies, compared with $17.38 for the large companies and $20.91 for the small companies. The difference in this item between the large and small companies, namely, $3.53 per ton, corresponds almost exactly to the difference between the works cost of Bessemer billet ingots for the large and the small companies already given (p. 57).

There were also marked differences in labor cost. The average for all companies was $0.53 per ton, as compared with $0.51 for the large companies and $0.76 for the small companies. The chief cause for this difference is probably found in differences in average output per mill, but partly also to differences in labor-saving devices.

Against these lower mill costs, however, the large companies had much higher additional costs, namely, $1.20 for the large companies as compared with $0.03 for the small companies. As already explained (p. 29), most of this additional cost is an accumulation of additional costs in prior stages of production, which does not appear in the cost of the ingots used, because these were generally transferred at works cost. These additional costs were invariably much heavier for the large companies, and, as already explained, were generally unduly high for them, both for general expense and depreciation, while too low for the small companies.

The details of this additional cost were as follows:

Items.	Large companies.	Small companies.
General and miscellaneous expense	$0.61	....
Depreciation	.59	$0.03
Total	1.20	.03

The criticism of these items is in part the reverse of that for the similar items previously considered (p. 59). In this case the depreciation appears too low for the large companies, although the general expense is much too high. For the small companies these charges appear entirely inadequate.

On account of these inequalities in additional costs the differences in total book costs were not so great for the large and small companies as the differences in mill costs.

The average total book cost for all companies was $20.11 per ton of large Bessemer billets, for large companies $19.89, and for small companies $22.54 per ton. The difference in total book cost between the large and small companies, therefore, was $2.65 per ton.

If instead of the above additional costs an assumed normal cost of $1.10 per ton be taken (including cumulative additions for pig iron and ingots), the difference in total book cost between large and small companies would be $3.82.

COMPARISON OF COSTS AFTER ELIMINATION OF INTERMEDIATE TRANSFER PROFITS.—The elimination of antecedent profits from transfers of materials tended to reduce the average costs for all companies, this effect being very pronounced for the large companies and of much less importance for the small companies. The only item of cost which was affected in any case by the revision was that for the ingots used.

The book costs of ingots used for all the companies—$17.67 per ton of billets—was reduced to $15.46 per ton by the deduction of transfer profits. The transfer profits so deducted comprise, of course, all the transfer profits in prior stages of production affecting the cost of this item from the ore, coke, pig iron, ingots, etc.

The average mill costs of large Bessemer billets for all companies were reduced from a book figure of $19.01 per ton to $16.80 by the elimination of these transfer profits. In a similar manner the total book cost was reduced from $20.11 per ton to $17.90. The final differences were exactly the same, of course, as the differences in the cost of ingots used, which are given above. They were naturally a little greater than for the corresponding costs of Bessemer billet ingots, because a little more than 1 ton of ingots is required to make a ton of billets.

As stated in discussing these costs for the preceding products, while the elimination of antecedent profits tends by lowering costs to show a greater margin between costs and prices, it also makes it necessary to compare this greater margin of profit with a greater total investment.

The elimination of antecedent profits affected chiefly the costs of the large companies. The cost of ingots was the only item affected.

For the large companies the elimination of transfer profits reduced the cost of ingots from $17.38 per ton of billets to $15.05, a difference of $2.33 per ton.

The same differences naturally appear in the mill costs in each case, the elimination of transfer profits reducing the original figure of $18.69 to $16.36.

In exactly the same way the total book cost of large companies of $19.89 per ton of billets was reduced to $17.56.

The elimination of transfer profits reduced the cost of ingots for small companies from a book figure of $20.91 per ton of billets to $20.06 per ton, or by $0.85 per ton. A corresponding difference appears for the mill costs as shown on the books ($22.51) and the revised mill costs ($21.66), and likewise between the total book cost ($22.54) and the revised total costs ($21.69).

Comparing the large and small companies, the difference in total cost was $4.13 after eliminating transfer profits.

If, however, instead of taking these additional costs as a basis an assumed normal cost of $1.10 were used, the difference would be $5.30.

Section 10. Comparison of costs of Bessemer rails.

During the period here under consideration, namely, 1902 to 1906, practically the whole rail production of the country was from Bessemer steel. The figures of rail costs which are presented below include the most important and efficient mills which produced Bessemer rails, and, as already shown (p. 38), 77.1 per cent of the total production of the entire country.

The following table gives the book costs of heavy Bessemer rails, and the same costs after the elimination of antecedent transfer profits. As all the companies making heavy Bessemer rails were large companies, only one group is shown in the table.

TABLE 16.—AVERAGE BOOK COST PER GROSS TON OF HEAVY BESSEMER RAILS AND COST EXCLUDING TRANSFER PROFITS, FOR ALL COMPANIES, 1902-1906.

[10,618,799 tons.]

Items of cost	Book cost.	Excluding transfer profits.
Ingots	$17.52	$15.05
Labor	1.16	1.16
Other operating	1.30	1.30
Mill cost	19.98	17.51
Additional costs	1.29	1.29
Total cost	21.27	18.80

The only item of cost affected by the elimination of antecedent profits was that of the ingots used.

The average book cost of ingots used was $17.52 per ton of rails. This was reduced to $15.05 by the elimination of transfer profits, or by $2.47. The transfer profits thus excluded relate in a greater or less degree to all the successive antecedent stages of the business (except the transfer of ingots to the rail mill).

The average mill cost of rails, which on the books stood at $19.98 per ton, was reduced to $17.51.

The mill cost as shown by the cost sheets was increased by the allotted additional expense from the profit and loss statements by $1.29 per ton, of which $0.62 was for general and miscellaneous expenses and $0.67 for depreciation. There is no doubt that in this case this allocation of depreciation charges gives too low a rate for rails (including the cumulative depreciation on account of pig iron and ingots), while the general expenses are probably too high for this product. The total amount is probably a fairly reasonable one. Added to the mill costs, they give $21.27 as the average total book cost, which after the profit eliminations described above was reduced to $18.80.

While the cost of rails is thus greatly reduced, the margin of profit between this cost and the prevailing prices is consequently increased; it must, therefore, be constantly borne in mind that the investment which must be covered by the profit shown is also greatly increased.

Section 11. Summary of total costs on basis of assumed normal charges for additional costs.

In the cost statements in the foregoing chapter (and also in Chap. III), certain inconsistencies in the additional costs have been noted in connection with particular products, which were in part due to the use of an arbitrary rule in allocating the general expense and general depreciation, but also to the fact that there were great differences in the way different companies conducted their business and kept their accounts.

Hence certain assumed normal additional costs were given in each case in order to give what was thought to be a fairer estimate of total cost and also to make a fairer comparison between the total costs of the large and small companies. These assumed normal costs are as follows: Pig iron, $0.50; Bessemer ingots, $0.60; Bessemer billets, $1.10; Bessemer rails, $1.30.

It will be convenient, therefore, to summarize the total costs arrived at, by the use of these assumed additional costs, in a single table. For this purpose it is sufficient to show the furnace, works, or mill costs and the total costs for the products whose costs are discussed in this chapter. These are given in the following table, distinguishing (1) book costs and (2) book costs less transfer profits for each of the groups of companies which have been discussed.

TABLE 17.—TOTAL COSTS PER GROSS TON FOR SPECIFIED PRODUCTS, ARRIVED AT BY ADDING TO THE AVERAGE MILL COSTS, AS SHOWN BY THE COST SHEETS, AN ASSUMED NORMAL CHARGE IN PLACE OF COMPUTED ADDITIONAL COSTS (GENERAL EXPENSE AND DEPRECIATION), AND THE SAME TOTAL COSTS EXCLUDING TRANSFER PROFITS, 1902-1906.

	All companies.		Large companies.		Small companies.	
	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.	Book cost.	Excluding transfer profits.
Bessemer pig iron:						
Furnace cost	$13.13	$11.34	$13.04	$11.11	$14.18	$14.12
Total cost (with assumed addition of $0.50 per ton)	13.63	11.84	13.54	11.61	14.68	14.62
Basic pig iron:						
Furnace cost	12.29	11.30	12.17	11.11	13.81	13.59
Total cost (with assumed addition of $0.50 per ton)	12.79	11.80	12.67	11.61	14.31	14.09
Bessemer billet ingots:						
Works cost	16.64	14.55	16.45	14.28	19.96	19.10
Total cost (with assumed addition of $0.60 per ton)	17.24	15.15	17.05	14.88	20.56	19.70
Bessemer rail ingots:[1]						
Works cost	16.54	14.70				
Total cost (with assumed addition of $0.60 per ton)	17.14	15.30				
Large Bessemer billets:						
Mill cost	19.01	16.80	18.69	16.36	22.51	21.66
Total cost (with assumed addition of $1.10 per ton)	20.11	17.90	19.79	17.46	23.61	22.76
Heavy Bessemer rails:[1]						
Mill cost	19.98	17.51				
Total cost (with assumed addition of $1.30 per ton)	21.28	18.81				

[1] No small companies.

The general effect, it will be remembered, of substituting these assumed normal charges for general expense and general depreciation ("additional costs") in place of the arbitrary allocations from data shown in profit and loss statements was to reduce the total costs of all products for the average costs of all companies in each instance except billets and rails, and still more so for the group of large companies. On the other hand, this method of fixing these additional costs raised the average total costs of small companies for the same products in every instance (except for rail ingots and rails, for which no small companies had any production).

Section 12. Limitations and interpretation of foregoing cost data.

As previously stated, the elimination of antecedent profits from the costs as shown by the books of the companies could not safely be carried beyond the products discussed above with the data available to the Bureau, particularly because the quality of the steel used for many rolled products was not generally specified.

It might appear, nevertheless, that the foregoing discussion of costs, eliminating transfer profits, in connection with the book costs of other finished steel products would afford a means of roughly estimating the net costs of such other more highly manufactured products, and to a certain extent this is undoubtedly true. For example, the net cost of ingots produced as computed by the Bureau, together with the data as to waste, would afford a means of revising the net cost of ingots used in making structural steel from ingots. To this could be added the costs above materials and any additional costs shown by the books of account. A still simpler and rougher method would be to deduct the difference between net cost and book cost of ingots from the book cost of ingots used. Really a greater difference should be deducted if the ingots used are the same as those for which the production costs are given, on account of the change in the cost of waste. The costs above materials would give all other items of mill cost.

There are two serious objections, however, to such an attempt to estimate net costs for other products. In the first place, the quality of steel used is not always known, and it makes a great difference whether it was Bessemer or basic. Most of the structural steel for which the costs are shown was of Bessemer steel, but the plates were to a large extent of basic open-hearth steel. The greater part of the sheets and almost all the wire rods for which cost data are presented were likewise made from Bessemer steel. Nevertheless, except perhaps for wire rods, there would be a considerable probability of error on this account if net costs were estimated in the manner indicated.

In the second place, the costs of production differed widely between different plants, so that the average production cost for all the concerns producing a certain product would afford no exact indication of the cost of this same product for the particular concerns which furnished the material used for making a given product in a succeeding stage of production. This would be especially true of a product like billets, which may be used for producing wire rods, merchant bars, and other articles. The particular quantities of billets supplied for making wire rods might come from different plants from those used for making merchant bars, and have considerably different costs of production.

For these reasons, as well as other technical difficulties, the Bureau refrained from estimating such costs, and confined its attention to the cost computations given above, which involved the deduction of actual amounts of profit for the several companies whose costs were averaged.

The foregoing statements of costs, including and excluding the antecedent transfer profits, show in a broad way the effect of such profits on the costs of products. They do not show the effect of such profits exactly, because it was not possible to ascertain all such profits, although there is no doubt that the great bulk of such transfer profits was ascertained and eliminated; moreover, from the nature of the transactions and the character of the records kept, no system of distributing such profits can be exact. (See note, p. 122.)

The elimination of the actual antecedent profits for transfers does not give, of course, an ideal or perfect integration cost, even for the large companies, because all the large companies included were not completely or equally integrated. The Steel Corporation was, of course, integrated very thoroughly with respect to all stages of production and manufacturing; but several of the other large companies were not so fully integrated, often being obliged to purchase a part of their materials of production. Hence, the average result for the revised costs, exclusive of transfer profits, is somewhat higher than it would be had the integration been absolutely complete.

Finally, the caution should be reiterated that when these net costs are considered it is absolutely necessary to have regard to the fact that whatever margin of profit may be found between them and the prices of the respective products, this margin of profit must be compared with a larger investment—i. e., furnish the return to investment not only on the immediate stage of production, but also on all anterior stages comprehended, back to and including the production of the raw materials.

Section 13. Effect of Steel Corporation's transportation profits on the cost of its ore.

General character of transportation profits.—The profits which were eliminated from the costs of raw materials and finished products in the foregoing sections related entirely to transfer profits on materials which were included in such costs. It was made clear, however, that in addition to these transfer profits there were transportation profits earned by these concerns which also had an important relation to the net costs of such products. These transportation profits relate to three classes of agencies, namely, railroads, Lake vessels, and docks for the transshipment of ore.

While each of these classes of transportation facilities were possessed by several of the companies whose costs have been averaged, the only company for which they were of any great importance was the Steel Corporation. For the Steel Corporation these transportation agencies were not only of extraordinary importance, but they also yielded to the Corporation in connection with ore traffic a very large profit. As has been shown in Part I of this report, already published, the Steel Corporation owns two railroads operating in the Lake ore mining districts, and particularly in the Mesabi Range, which were of unusual importance for this traffic, namely, the Duluth & Iron Range Railroad, and the Duluth, Missabe & Northern Railway. It also owns the largest fleet of ore-carrying vessels on the Great Lakes, which is operated under the name of the Pittsburgh Steamship Co. At lower Lake ports it owns, besides several important docks serving plants located on the Great Lakes, other docks for transshipping ore destined for points beyond, and in particular the Pittsburgh & Conneaut Dock Co. This dock is operated in connection with the Bessemer & Lake Erie Railroad, which is owned by the Steel Corporation and which furnishes it with the means of transporting its ore from the Great Lakes to the Pittsburgh district. At its terminal in the Pittsburgh district the Bessemer & Lake Erie Railroad connects with a belt line known as the Union Railroad, another subsidiary of the Steel Corporation, which serves the various plants of the Steel Corporation in that district.

The Steel Corporation has other important railway properties used for the transportation of ore, particularly in the Chicago district, where two of its railways, namely, the Chicago, Joliet & Eastern, and the Chicago, Lake Shore & Eastern, connect its ore docks with all of its plants in that locality.

By means of these various transportation facilities the Steel Corporation is enabled to carry the great bulk of its ore from the mines to the manufacturing plants where it is consumed. In the mining region only a small part of its ore, namely, that portion mined on the Old Ranges in Michigan and Wisconsin, is necessarily transported by other railroads. On the Great Lakes, however, the Corporation ships a very considerable part of its total ore—rather more than one-third—by independent Lake carriers. Moreover, inasmuch as south of the Great Lakes a number of its furnaces can not be reached by its own railways, it is obliged to transport a considerable part of its ore shipments on other railway lines.

Certain of these transportation agencies, particularly the two ore roads in the ore-mining region, the Lake ore vessels, the ore docks, and the Bessemer & Lake Erie Railroad, are primarily carriers of ore. The ore tonnage of the Union Railroad is also very heavy. For the other carriers mentioned, however, the transportation of ore is of secondary importance. Consequently it is not practicable to determine with any satisfactory degree of accuracy the profits obtained from the carriage of ore except for those agencies which have just been mentioned.

METHOD OF DETERMINING TRANSPORTATION PROFITS ON ORE FROM GROSS RECEIPTS THEREON.—Where railroads or other carriers handle several commodities, it is of course quite evident that there is generally no possibility of determining with absolute exactness the amount of profit from each. A large part of the costs of the business can not be allocated to particular lines of traffic, and consequently their particular profits can not be determined. Inasmuch as the ore traffic was the chief business of these ore carriers, the Bureau regarded it as reasonable to allot to the ore traffic the same proportions of the total net operating profit as the gross receipts from the ore traffic bore to the gross receipts from all traffic. It is certain that this does not tend to magnify the profit attributable to ore.

Indeed, this method of computation probably underestimates the net profit from ore traffic—first, because the rates and receipts from ore were unusually high, and second, because the direct cost of handling the traffic was relatively low. That the ore rates were high is evidenced by the fact that on the railroads in the ore region they averaged about 1 cent per ton mile during this period.[1] On other railroads they were also relatively high, though not in the same degree. That the direct costs of conducting the ore traffic were low is plain when it is considered that this commodity is generally handled in trainloads.

The same principle would hold true in the case of the Pittsburgh Steamship Co. It was also undoubtedly true of the Bessemer & Lake Erie. In the case of the Union Railroad it is possible that the ore profits were relatively no greater, or possibly not as great, as for the other traffic on that road, which is considerable; but taking the carriers south of the Lakes together there can be no question whatever that the total net profits here assigned the ore understate the facts.

The data for estimating these profits on the basis indicated for the calendar years 1902 to 1906, inclusive, were furnished by the Steel Corporation.

ESTIMATED NET PROFITS OF STEEL CORPORATION ON TRANSPORTATION OF ORE.—The following table shows the gross receipts from all freight traffic and the gross receipts from ore, together with the net operating profit from all traffic, as reported by the Steel Corporation. As already explained, the Bureau's estimate of the net profit from ore is computed on the assumption that it bore the same ratio to the total net operating profits as the gross receipts from ore bore to the gross receipts from all freight traffic.

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[1] These rates have recently been reduced. (See p. 79.)

TABLE 18.—TOTAL ESTIMATED NET PROFITS OF STEEL CORPORATION ON TRANSPORTATION OF ORE (INCLUDING ORE SHIPMENTS OF OUTSIDERS) FROM MINING REGIONS TO FURNACES BY COMPANIES, 1902-1906.

Carriers.	Gross receipts.	Gross receipts from ore.	Total net operating profits.	Estimated net operating profits from ore.[1]
Duluth & Iron Range R. R.	$32,037,940.42	$26,590,173.84	$15,703,239.47	$13,017,515.59
Duluth, Missabe & Northern Ry.	32,104,324.00	28,570,826.98	18,426,574.97	16,417,332.68
Pittsburgh Steamship Co.	41,622,827.98	37,692,370.08	9,743,161.46	9,397,035.62
Bessemer & Lake Erie R. R.	23,661,689.97	14,274,443.61	9,642,528.76	5,834,472.20
Union R. R.	12,681,621.97	6,804,815.97	4,928,873.56	2,646,025.39
Pittsburgh & Conneaut Dock Co., and other docks				[2] 5,571,121.88
Total	142,108,404.34	113,932,630.48	58,444,378.22	52,883,503.36

[1] While these are derived by proportion from the total net operating profit and the gross earnings from ore and total gross earnings, this was worked out, of course, by years and should not be computed from the five-year totals.

[2] Partly estimated from gross receipts and partly reported directly.

The profits of the Steel Corporation from the transportation of ore, in so far as they can be estimated, as shown in the foregoing table, include the profits earned on the ore shipments of outsiders. It is a fair question whether in estimating the net result to the Steel Corporation in respect to its position as a producer of ore and manufacturer of iron and steel products, the full amount of this profit should not be deducted from the cost of its ore. Looking at the problem from a broad standpoint rather than a cost-accounting standpoint, the Bureau is inclined to the opinion that this would be a reasonable and proper method for determining the full and complete net results to the Steel Corporation. However, from a strict cost-accounting point of view, in order to determine the cost of ore at lower Lake ports or other points, it is quite proper to limit the profits to be taken into consideration to those which are earned by the Steel Corporation on the carriage of its own ore. This is the practice of the Steel Corporation in determining its own integration costs (see p. 94), and after discussion of the matter with representatives of the Corporation the Bureau has accepted it for the purpose of the present computation. Hence, from the amount of profit on the transportation of ore shown in the foregoing table, it is necessary to deduct that part of the profit which was earned on the carriage of outside ore. These profits on outside ore are computed as follows:

Duluth & Iron Range R. R.	$4,331,334.87
Duluth, Missabe & Northern Ry.	1,482,129.95
Pittsburgh Steamship Co.	522,871.43
Total	6,336,336.25

The profits of the other transportation agencies noted in the foregoing table are, so far as the Bureau's information goes, earned entirely on the transportation or handling of the Steel Corporation's own ore. Deducting the above profits on outside ore from the total net profits earned by the Steel Corporation on the transportation of ore shown in the above table, gives the profit earned by the Steel Corporation from the carriage of its own ore, which in the aggregate was $46,547,167.11.

The significance of this aggregate profit of the Steel Corporation on the transportation of its own ore with respect to the net cost of ore can be best shown by comparing it with the total deliveries of the Steel Corporation's ore at lower Lake ports during this same period (1902–1906), namely, 77,304,164 tons. Distributed over this tonnage, the foregoing profits amounted to a trifle over $0.60 per ton of ore. Of this, $0.42 was earned on the transportation of ore to lower Lake ports. This amount per ton shows practically what may be deducted from the average cost of ore of the Steel Corporation at lower Lake ports. The total average amount per ton, namely, $0.60, is the deduction to be made from the cost of ore at the blast furnaces in order to determine the total effect of transportation profits on the cost of the Corporation's ore used in making pig iron.

These profits, as already stated, are figured against its total deliveries at lower Lake ports as a convenient common denominator. These deliveries were nearly the same as the furnace consumption. Of course, the actual profit on transportation for a given lot of ore would vary between one specific shipment as compared with another according to its origin and destination. On the other hand, it would make no difference what the quality of the ore was. The fairest way to show the total effect of such profits is in the form stated above.

It should be noted that this average profit is that on the ore of the Steel Corporation alone, and should not, of course, be applied to the average ore costs for the large companies given in section 2 of this chapter.

EFFECT OF THIS TRANSPORTATION PROFIT ON COSTS OF IRON AND STEEL PRODUCTS.—This large profit of the Steel Corporation on the transportation of its own ore is an exceedingly important factor in its net cost of manufacture for iron and steel products, owing to the fact that approximately 1.9 tons of Lake ore, on the average, including both Bessemer and non-Bessemer ores, were, during this period, required to produce 1 ton of pig iron. This ore profit assumes increased importance in the costs for pig iron, and still further importance in the costs of steel products, owing to the fact that in each successive stage there is some further loss of material. It is not intended, however, at this place to take up the relation of this profit to the cost of the iron and steel products of the Steel Corporation for this period (1902–1906). In Chapter VII the "integration" costs of the Corporation for the year 1910—that is, the costs after deducting both the intermediate transfer profits and the Corporation's profit on the transportation of its ore—will be shown according to its own records.

CHAPTER VI.

COMPARISON OF 1902–1906 COSTS WITH PRESENT COSTS.

Section 1. Introductory.

The average costs for 1902 to 1906, as already stated (p. 7), were too elaborate to be brought down to date. Furthermore, it was reasonably certain that an average for such a recent five-year period would be representative of present conditions. There had been no important changes since then in the fundamental conditions of the industry, such as the character of ore and fuel used, and no very marked changes in the operating conditions, such as wages of labor, transportation charges, or technical methods. In fact, in so far as changes had occurred in operating conditions, it was likely that they would to a considerable extent offset each other. Thus an increase in wages would be partly offset by increased volume of output and a greater application of labor-saving devices.

The Bureau did not leave the determination of this question to a priori arguments, however, but obtained considerable information from various companies concerning the actual changes in cost in the principal branches of production and manufacture.

The primary question to be determined was whether there had been any increase in the cost of producing the raw materials, and if this was so whether such increase in cost had been offset by any added economy in converting them into iron and steel. The examination of this subject, therefore, is divided into two parts—(1) the cost of production of ore and coke and limestone and (2) the costs above materials in making pig iron, steel, and some of the chief rolled products.

The costs for 1902 to 1906 will be compared, therefore, with those for the most recent year available, namely, 1910. Certain comparisons, particularly for ore, will combine a greater number of years since 1902 to 1906 to show more clearly the general average conditions in recent years as compared with 1902 to 1906.

Section 2. Comparison of the costs of raw materials.

The costs of ore and coke are, of course, fundamental for the production of pig iron, steel, and steel products. Limestone forms such a comparatively small item of cost and is so abundant in all regions that changes in respect thereto are insignificant. The item of limestone in pig-iron costs can be conveniently covered by a simple comparison of what the pig-iron cost sheets themselves show.

ORE.—The Bureau obtained the book costs of Lake ore at lower Lake ports for all the mines of the Steel Corporation for the whole period 1902 to 1910, inclusive, and also the costs of two other important interests mining Lake ore for the period 1902 to 1909, inclusive. As the tonnage of these two latter companies formed, however, but a small proportion of the total, the lack of them for the year 1910 does not have any material effect on the average cost for the period 1907 to 1910. There is little doubt that if they were included the average cost would tend to be a little lower rather than higher. This is evident from the following facts, namely, that the average for these two concerns in 1909 was $2.61 per ton as against $2.63 per ton for the Steel Corporation, while the latter showed a sudden increase to $2.88 per ton in 1910 due in part to the Hill royalties, which are discussed below (p. 77). This, of course, would not have affected the costs of the other companies. Moreover, its effect on the average for all the companies for the four years 1907 to 1910 was, of course, small.

The following table shows the average book cost of ore for all three companies at lower Lake ports in substantially the same form as that already used, divided into two groups of years, namely, 1902 to 1906, inclusive, and 1907 to 1910, inclusive.

TABLE 19.—COMPARISON OF AVERAGE BOOK COST PER GROSS TON OF LAKE ORE AT LOWER LAKE PORTS FOR 1902-1906, INCLUSIVE, WITH 1907-1910, INCLUSIVE, FOR THE STEEL CORPORATION AND TWO OTHER LARGE COMPANIES.

Items of cost.	1902–1906 (88,082,551 tons).	1907–1910 [1] (88,833,156 tons).
Labor	$0.43	$0.35
Other mining	.21	.20
Stripping and development	.03	.11
Depreciation	.13	.13
Royalty	.25	.29
Cost at mine	1.05	1.08
Rail freight	$0.70	$0.74
Lake freight	.74	.72
Cost at lower Lake ports	2.49	2.54
General charges	.09	.16
Total book cost	2.58	2.70

[1] For 1910 includes the costs of the Steel Corporation only.

In the first place, it should be noted that these costs cover a very large quantity of ore, namely, 88,082,551 tons for the five years 1902 to 1906 (an average quantity of 17,616,510 tons per annum), and 88,833,156 tons for the four years 1907 to 1910 (an average quantity of 22,208,289 tons per annum). For the two periods stated they cover 60.8 per cent and 56.3 per cent, respectively, of the total tonnage mined on the Lake Superior ranges.

The total book cost at lower Lake ports, as shown by the combined cost sheets, for the period 1902 to 1906 was $2.58, while for the period 1907 to 1910 it was $2.70 per ton, showing an increase of $0.12 per ton of ore. The direct labor expense in mining showed a decrease from an average of $0.43 per ton for the period 1902 to 1906 to $0.35 for the period 1907 to 1910, a reduction of $0.08 per ton. This was undoubtedly due to two causes—(1) a greater proportion of the production in the second period was from the Mesabi Range, where the labor costs of mining are generally lower, and (2) there were more open-pit mines worked in the second period than in the first, for which mine labor and "other mining" costs average less per ton. The "other mining" items, however, showed a decrease, namely, from $0.21 to $0.20 per ton. The lower labor costs are offset by increased charges for stripping, which, in part, was the cause of such lower costs. This item, so far as ascertainable, is therefore shown separately, although it might be treated as a part of depreciation for improvements. Stripping operations, however, are sometimes charged in the direct mining costs of labor, supplies, etc., about 70 per cent of the cost being for labor. These operations, by enabling the extraction of ore from open pits instead of through shafts, etc., reduce the direct operating expenses. The stripping cost increased from an average of $0.03 per ton for the period 1902 to 1906 to $0.11 per ton for the period 1907 to 1910, an increase of $0.08 per ton. This was practically an offset to the lower labor and "other mining" cost just noted of $0.09 per ton. The increase in stripping is unduly exaggerated in this comparison, however, because in the first years covered by these comparisons, especially 1902, 1903, and 1904, none of the mines showed the costs for this item separately, though they were then relatively small.

The item of depreciation is to some degree arbitrary in amount. It averaged $0.13 per ton for the period 1902 to 1906, and was the same also for the period 1907 to 1910.

The average royalty for the period 1902 to 1906 was $0.25 per ton, as against $0.29 for the period 1907 to 1910, showing an increase of $0.04 per ton. This increase in average royalty was partly due to the inclusion of the abnormally high royalties paid by the Steel Corporation on the "Hill lease," which have been discussed in some detail in Part I of this report. Inasmuch as the Steel Corporation has, since Part I of this report of the Bureau was published, given notice of the cancellation of this lease (to take effect Jan. 1, 1915), these abnormally high royalties will not form a permanent and increasing burden on the ore industry of the Lake region after that date. Indeed, they should not be regarded as a normal increase in the cost of producing ore even at the present time, inasmuch as the purpose of this lease, in the opinion of the Bureau, was to monopolize the ore reserves of the Lake region. The quantitative effect of these Hill royalties is partly indicated in the average royalty cost of the Steel Corporation in 1910. (See p. 95.) If the Hill royalties and the tonnage of ore mined from the Hill leases were eliminated from the Steel Corporation's royalty cost in 1910, the average royalty for that company would have been only $0.28 per ton, instead of $0.34, a difference of $0.06 per ton.

The average cost at mine for the period 1902 to 1906 was $1.05 per ton, and for the period 1907 to 1910 it was $1.08, an increase of $0.03 per ton.

The cost of transporting ore by rail from the mines to upper Lake ports averaged $0.70 per ton for the period 1902 to 1906 and $0.74 for the period 1907 to 1910, an increase of $0.04 per ton. This was not due, however, to any change in freight rates, but to the fact that in the second period a greater proportion of the total tonnage was mined from the Mesabi Range, which has a higher freight rate than the Michigan ranges.

For Lake freights, on the other hand, there was a slight decrease in cost, the average for 1902 to 1906 being $0.74 per ton, as against $0.72 for 1907 to 1910, showing a decline of $0.02 per ton. Lake freights, unlike rail freights, were changed from year to year. In spite of the greater proportion of ore shipped from the Mesabi Range (which has a relatively high Lake freight), the general decline in Lake rates resulted in a small decline in the average Lake freight.

Taken together, the rail and Lake freights for 1907 to 1910 showed a slight increase, namely, $0.02 per ton more than in 1902 to 1906.

The cost at lower Lake ports, exclusive of general administrative charges and taxes, averaged $2.49 for the period 1902 to 1906, as compared with $2.54 per ton for 1907 to 1910, an increase of $0.05 per ton.

There was a marked increase in the general charges for administration, depreciation, and taxes, namely, from an average of $0.09 per ton in the first period as compared with $0.16 in the second period, showing a difference of $0.07 per ton. The greater part of this increase was due to increases in the taxes on ore companies. While the Bureau does not commit itself to the propriety of charging property taxes into the costs of production, it has included them in all the foregoing statements of cost of production, according to a common practice of commercial accounting.

The total book cost at lower Lake ports thus arrived at averaged, as stated above, $2.58 for the period 1902 to 1906 and $2.70 for the period 1907 to 1910, an increase of $0.12 per ton.

These costs are all "book costs," i. e., there has not been any deduction of transportation profits on ore of the Steel Corporation or of the other companies whose costs are combined in this average. If these had been eliminated, there is no question that the integrated cost so arrived at would have been lower for the period 1907 to 1910 than for the period 1902 to 1906. This would be so, because (1) a greater proportion of Mesabi ore was produced in the period 1907 to 1910 than in the prior period, upon the shipments of which the Steel Corporation's transportation profits chiefly accrue, and (2) the rates of profit per ton of ore on the Steel Corporation's two railroads in the ore region were considerably higher in the period 1907 to 1910 than in the prior period, as is plainly indicated by a marked decrease in the average ratio of operating expense to gross receipts for these roads.

Another fact of great importance in considering the present costs of Lake ore, as well as the probable costs for the next few years, as distinguished from the comparison for the two periods covered by the foregoing table, is found in the recent change made in the rail rates on ore from the Mesabi and Vermilion Ranges. During the latter part of 1911 (and since the publication of the first part of this report) the Steel Corporation announced reductions in the rail rates for the Mesabi and Vermilion Ranges as follows: The Mesabi rate was reduced from $0.80 per gross ton to $0.60 per gross ton, and the several Vermilion rates of $0.90 and $1 per gross ton were reduced to a flat rate of $0.60 per gross ton. Just what effect these reductions will have on the cost of ore at lower Lake ports depends, of course, on the particular tonnages shipped from each range. For the mines whose costs for the period 1907 to 1910 are comprised in the foregoing table (Table 19) the reduction in average freight rate would be about $0.17 per ton, and this would result in a reduction in the average cost at lower Lake ports of an equal amount per ton. Taking the average book costs of the period 1907 to 1910 as a basis, the cost of ore at lower Lake ports would be reduced thereby from $2.70 per ton to $2.53, and this ore cost would be $0.05 per ton lower than the average cost for the period 1902 to 1906, namely, $2.58 per ton.

Looking merely at the book cost of Lake ore for the years 1907 to 1910 as compared with that for 1902 to 1906, there would appear, therefore, to be an increase of about $0.12 per ton. Considering, however, the lower ore rates now prevailing, it is clear that the costs of ore at the present time (1912) are probably lower than those in the period 1902 to 1906.

Coke.—For all practical purposes the question whether there has been an increase since 1902 to 1906 in the cost of coke used in making pig iron is determined by a comparison of the costs for Connellsville beehive coke. The data on this point available to the Bureau are less complete than for Lake ore, and consist (1) of average costs for the Steel Corporation's Connellsville coke for the period 1902 to 1906 and for the single year 1910, and (2) of average costs of Connellsville coke for two important independent companies for the periods 1902 to 1906 and 1907 to 1909. The latter may be conveniently taken up first.

The costs for these two independent companies can not be shown by items because in one case the cost was figured with the cost of coal at the ovens, and in the other case was a cost which included an item of freight to ovens in the cost of coal. The significant figures, however, are the total costs of the coke, which for the two companies combined were as follows:

Periods.	Tonnage.	Average cost per net ton.
1902–1906 (5 years)	5,345,280	$2.02
1907–1909 (3 years)	3,049,589	2.11

From this comparison it appears that there was a small increase in the cost of Connellsville beehive coke, namely, $0.09 per net ton. While the production was considerable, it was, of course, only a small part of the total, and can not be regarded as conclusive as to the change in average cost.

The second comparison to be presented is that of the average book cost for the total production of the H. C. Frick Coke Co. for 1902 to 1906, inclusive, with the average book cost for the single year 1910. This is shown in the following table:

TABLE 20.—COMPARISON OF COST PER NET TON OF CONNELLSVILLE BEEHIVE COKE OF THE H. C. FRICK COKE CO. FOR 1902–1906 WITH 1910.

Items of cost.	1902–1906 (43,579,144 tons).	1910 (9,824,446 tons).
Labor	$0.94	$1.07
Other operating[1]	.24	.30
Depreciation	.14	.18
Total	1.32	1.55

[1] Includes materials and supplies, general expense (administration, taxes, and insurance), less credits for profits on tenements, blacksmithing, farms, etc.

According to the foregoing table, there was a marked increase in the cost of producing coke in 1910 as compared with the average of the five years 1902 to 1906, inclusive, namely, $0.23 per net ton.

It is quite probable that if the average for the period 1907 to 1910 was given instead, the increase would have been decidedly less. However, in the absence of definite figures, the Bureau prefers to accept this statement for the purposes of the present comparison. Furthermore, in view of the importance of the Frick company and the immense tonnage it produces, it is disposed to disregard the preceding comparison for the two independent companies whose costs showed a much smaller increase.

LIMESTONE.—The Bureau did not attempt to ascertain the direct costs of production of limestone because this cost was a small item per ton of pig iron and the conditions of the industry were such that it did not seem necessary. For the purpose of determining whether there has been any important change in the cost of the raw material, the pig-iron cost sheets afford sufficiently conclusive evidence.

For such a comparison it is preferable, of course, to compare pig-iron costs which do not show any considerable change in the quantity of ore and coke used per ton of pig iron. A good basis for this is found in the limestone costs for Bessemer pig iron at three large furnace plants of the Steel Corporation for the five-year period 1902 to 1906 and for the year 1910. These are shown in Table 21 (p. 82) in connection with the costs of pig iron. The costs and quantities used per ton of pig iron produced were as follows:

	1902–1906	1910
Limestone cost per ton of pig iron	$0.40	$0.40
Gross tons of limestone used per ton of pig iron	0.447	0.443

The limestone costs were identical per ton of pig iron for the five-year period and for the year 1910. Furthermore, there was substantially no change in the quantity required per ton of pig iron.

It may be concluded, therefore, that neither the cost of production of limestone itself nor the cost of limestone used in the production of Bessemer pig iron has changed in any significant degree.

In the case of basic pig iron, however, it may be that there has been a slight increase in limestone costs per ton of pig iron made, due to lower average iron content of ores used, but the available data do not furnish any reliable evidence on this point.

Section 3. Costs above materials of pig iron, Bessemer steel, and heavy standard rails.

In the preceding section the costs of the raw materials for the period 1902 to 1906 have been compared with the costs for subsequent years, and it has been shown that there was a small increase in the actual costs of raw materials used in making pig iron. Furthermore, it was shown that at the present time (1912) the cost of the most important raw material is probably less rather than greater.

The next question to be determined is whether the costs other than materials, or, as they are usually called, costs above materials, in the manufacture of pig iron, steel, and rolled products have increased or decreased. Obviously, no further attention need be paid to the raw materials when once the general changes in the costs thereof have been ascertained and their cumulative effect in subsequent stages of production computed.

PIG IRON.—The general position of the iron and steel industry of any country or district with respect to the cost of production is practically determined by its cost of pig iron. This assumes, of course, that the manufactures of steel are developed on a large scale, and that the market for products is broad enough to enable a large tonnage to be produced, and so to justify modern equipment and methods.

It has already been shown (p. 21) that the cost of pig iron is chiefly a question of the cost of the raw materials, ore, coke, and limestone, which costs for 1902 to 1906 have already been compared with the costs of subsequent years.

The costs above materials, however, are of considerable importance for this comparison, and these will now be considered.

For the comparison of these costs the principal data relied on by the Bureau are the average costs of Bessemer pig iron for three important plants of the Steel Corporation for the five-year period 1902 to 1906 and for the year 1910. These are shown in the following table:

TABLE 21.—COMPARISON OF BOOK COST PER GROSS TON OF BESSEMER PIG IRON AT THREE FURNACE PLANTS OF THE STEEL CORPORATION FOR 1902-1906 WITH 1910.

Items of cost.	1902–1906 (13,051,404 tons).	1910 (2,668,230 tons).
Net metallic mixture	$7.39	$8.77
Coke	4.05	3.94
Limestone	.40	.40
Labor	.67	.48
Other operating	.73	[1] .43
Furnace cost[2]	13.24	14.02

[1] The items covered in this figure show a lower aggregate sum in 1910 than for the previous period chiefly on account of credits for gas used in other departments of the works.

[2] This does not include any allowance for "additional costs" shown on profit and loss accounts. (See pp. 10 and 25.)

These three furnace plants together produced 13,051,404 tons of pig iron in the five-year period 1902 to 1906, or an average of 2,610,281 tons per annum, and they produced 2,668,230 tons in 1910. Two of them are among the very best of the Steel Corporation's furnace plants, while the third is probably of somewhat less efficient character.

While all the items of furnace cost are shown in this table, it should be distinctly understood that the comparison which should now be made is simply that for costs above materials, disregarding the "book costs" of the raw materials. The reason for this is evident, namely, that the book costs of the ore (net metallic mixture) and coke are not net costs (i. e., they are costs based on transfer prices, which include profits paid to the Steel Corporation's ore and coke companies), and hence the differences between them do not even tend to show a difference in real net cost.

Consideration is given, therefore, simply to the items of labor cost and "other operating" costs. It appears from the table that for these furnace plants the average cost for labor was $0.67 per ton of Bessemer pig iron for the five-year period 1902 to 1906 and $0.48 for the year 1910, a decline of $0.19 per ton. This marked reduction in cost was probably due to a more effective application of labor-saving methods. The other operating costs averaged $0.73 per ton of pig iron for the five-year period and $0.43 for the year 1910, a decline of $0.30 per ton. The chief cause for this decline was the more extensive utilization of a by-product of the furnace, namely, blast-furnace gas, which, so far as used in steel works, rolling mills, and other producing departments of the same plant, is, of course, credited to the blast-furnace plant. It is true that such deduction for costs of making pig iron were not as carefully kept in the five-year period 1902 to 1906 as in the year 1910, so that the real gain in this respect was less than the cost sheets indicate. On the other hand, the costs above materials for making pig iron into steel and for rolling steel must have been understated in the five-year period in a corresponding degree. As will be shown later, such costs have in fact shown a slight increase for certain products, which are compared, and this increase may be partly explained by this difference in the methods of cost accounting. However, if full credit is to be given for the increase in the latter costs, full credit should also be given for the decrease in pig-iron costs. Hence, it is proper to compare these costs as they are shown in the cost sheets themselves. The total reduction in the "other operating" costs at the blast furnaces was not due solely to this particular credit item for gas, but also in part to other improvements in furnace operation.

The total cost above materials of Bessemer pig iron for these furnaces, therefore, averaged $1.40 per ton for the five-year period 1902 to 1906, as compared with $0.91 for 1910, showing a decline of no less than $0.49 per ton.

In converting the chief raw materials (ore and coke) into pig iron, there were certain changes involved in the cost of these raw materials independent of the cost of producing them. These arose from differences in the average quality used, such as iron content, or from differences in the skill used in combining them (furnace practice).

The net metallic mixture required to produce a ton of Bessemer pig iron averaged 1.84 gross tons for the five-year period 1902 to 1906 and

1.83 gross tons in 1910.[1] Chiefly in consequence of this, perhaps, the quantity of coke required per ton of pig iron produced declined also; it averaged 1.13 net tons for the five-year period 1902 to 1906 and 1.12 net tons for 1910.

Assuming now the average increase in the cost of Lake ore for all companies in the four-year period 1907 to 1910, as compared with the five-year period 1902 to 1906 (see Table 19), as a basis, namely, $0.12 per gross ton, it is evident that inasmuch as about 1.83 gross tons of ore were required per ton of Bessemer pig iron in 1910 (as just shown above), the increase in the cost of this ore per ton of pig iron may be roughly computed at 1.83 times $0.12, or $0.22 per ton.

If, instead of these ore costs for all companies, the average ore costs of the Steel Corporation alone be taken for the same periods as for the pig-iron costs, namely, $2.58 per ton for the five-year period 1902 to 1906 and $2.88 for the year 1910, the difference would be $0.30 per ton, and the increase in ore costs for these furnaces, computed in the same manner, would be $0.55 per ton of pig iron. The average costs of ore for this one year are hardly as representative of the general conditions as those for the average for the four-year period used in the first case.

In the same way, assuming the average increase in the cost of Connellsville coke for the Steel Corporation in 1910, as compared with the five-year period 1902 to 1906 (Table 20) as a basis, namely, $0.23 per net ton, the increase in the cost of coke in Bessemer pig may be computed from the average quantity required. This, as shown above, was 1.12 net tons, which, multiplied by the increase in cost per net ton, gives $0.26 per ton of pig iron.

The costs of limestone, as stated above (p. 81), may be taken at the same figures as shown on the cost sheets (see Table 21), which showed no change for Bessemer pig iron as between the five-year period 1902 to 1906 and the year 1910.

Hence, to determine whether there has been any increase in the net costs of producing Bessemer pig iron the increases in the costs of ore and coke may be compared with the decreases in the costs above materials. The results are shown as follows:

Ore cost, increase	$0. 22
Coke cost, increase	. 26
Total, increase	. 48
Cost above materials, decrease	. 49
Net decrease (per ton of pig iron)	. 01

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[1] The net metallic mixture used by these furnaces thus showed a slight improvement in iron yield and it should be noted that a slightly greater yield is shown for all Bessemer furnaces of the Steel Corporation in 1910.

If, however, the increase in ore costs in 1910 were taken at $0.55 per ton instead of $0.22, as shown above, there would have been a net increase of $0.32 per ton of pig iron.

As already stated, however, the Bureau regards the first result, namely, a decrease in cost of $0.01 per ton of Bessemer pig iron, as more correctly representative of recent conditions.

When, moreover, present conditions (1912) are considered, there is no doubt that the costs of Lake ore are lower rather than higher, for the reasons already given in detail (p. 79), namely, lower ore rates on the railroads serving the Mesabi and Vermilion Ranges. The present cost of ore being lower, there is no question that the present cost of making pig iron is somewhat lower than in the period 1902 to 1906.[1]

BESSEMER INGOTS.—The cost of Bessemer steel manufacture is just the same for Bessemer billet ingots and for Bessemer rail ingots except for the extra cost of manganese. This is true at least if the same works are operated in the same way, with respect to the use of direct metal. The difference in cost of manganese is of no consequence in this case, because only costs above materials are especially under consideration.[2]

BESSEMER BILLET INGOTS.—While much more Bessemer billet steel is produced by the Steel Corporation than Bessemer rail steel, the available data for comparison are in this case the costs for one plant only, namely, the average works costs as shown by the books for the five-year period 1902 to 1906 and for the year 1910.

TABLE 22.—COMPARISON OF BOOK COST PER GROSS TON OF BESSEMER BILLET INGOTS AT ONE PLANT OF THE STEEL CORPORATION FOR 1902–1906 WITH 1910.

Items of cost.	1902–1906 (2,737,387 tons).	1910 (590,503 tons).
Pig iron and scrap[3]	$15.46	$14.84
Labor	.62	.54
Fuel	.33	.18
Other operating	.65	.65
Works cost[4]	17.06	16.21

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[1] While the Bureau had certain other comparative data which threw some light on the changes in cost above materials of pig iron, none of them was satisfactory, either on account of greatly varying tonnages or mixture of basic and Bessemer pig iron.

[2] The available evidence does not show any increase in the average cost of manganese for the plants of the Steel Corporation.

[3] Including manganese.

[4] This does not include any allowance for "additional cost" shown on profit and loss accounts. (See pp. 10 and 25.)

As stated above (see p. 82), no attention need be paid in this comparison to the cost of pig iron and scrap (including manganese), because the comparison to be made is simply between the "cost above materials."

This cost above materials is summarized in the items of labor, fuel, and other operating. The average labor cost for the five-year period was $0.62 per ton of ingots as compared with $0.54 for 1910, a reduction of $0.08 per ton. The fuel cost showed an even greater reduction, namely, from $0.33 to $0.18, or $0.15 per ton of ingots.

This large reduction in fuel cost was evidently due to a great change in economy of production obtained by using much larger proportions of molten pig iron direct from the blast furnaces. There was no change in the "other operating" costs, which averaged exactly $0.65 per ton of ingots in each case. Comparing the "cost above materials," that for 1902 to 1906 averaged $1.60 per ton of ingots and that for 1910 only $1.37, a reduction of no less than $0.23 per ton.

In the foregoing comparison of the changes in the cost of making Bessemer pig iron for these same two periods (p. 84) the general conclusion was that there was probably a very small decrease—$0.01 per ton—but if the average ore costs of the Steel Corporation for the year 1910 alone were taken, there would be an increase of $0.32 per ton.

In making the Bessemer billet ingots in 1910 comprised in the above table the net quantity of pig iron and scrap used was 1.08 tons per ton of product. Hence, according as the cost of Bessemer pig iron is assumed to have decreased in 1910 as compared with the five-year period (1902–1906) by 1 cent per ton or increased by $0.32 per ton, the net change in cost on this account would be 1 cent decrease or $0.35 increase per ton of ingots, respectively.

Allowing next for the indicated reduction in "cost above materials" shown above, namely, $0.23 per ton, the total change in the cost of making Bessemer billet ingots for these two periods might be computed to be either a decrease of $0.24 per ton or an increase of $0.12 per ton.

These computations refer, of course, only to the change in cost between this five-year period and the year 1910. Taking into account the present position (1912) of the industry, i. e., the lower cost of ore at lower Lake ports on account of reductions in ore freights, there is no doubt that the net cost of making Bessemer billet ingots is distinctly lower than in 1910, and also somewhat lower than for the five-year period 1902 to 1906.

Bessemer rail ingots.—For the comparison of the costs of Bessemer rail ingots the following table gives the book costs at two of the largest Bessemer rail plants of the Steel Corporation for the five-year period 1902 to 1906 and the year 1910.

TABLE 23.—COMPARISON OF BOOK COST PER GROSS TON OF BESSEMER RAIL INGOTS AT TWO PLANTS OF THE STEEL CORPORATION FOR 1902–1906 WITH 1910.

Items of cost.	1902–1906 (8,516,925 tons).	1910 (1,399,127 tons).
Pig iron and scrap[1]	$14.86	$15.67
Labor	.49	.52
Fuel	.10	.10
Other operating	.47	.56
Works cost[2]	15.92	16.85

[1] Including manganese.

[2] This does not include any allowance for "additional costs" shown on profit and loss accounts. (See pp. 10 and 25.)

As already explained (see p. 82), the cost of the pig iron and scrap (including manganese) is of little interest in the present comparison, which is directed simply at the cost above materials.

This cost is summarized in items of labor, fuel, and other operating. The average labor cost for the five-year period 1902 to 1906 was $0.49 per ton of ingots produced as against $0.52 for the year 1910, an increase of $0.03 per ton. There was no difference in the average cost of fuel. For the various other operating expenses the average cost in the five-year period was $0.47 per ton, as compared with $0.56 in 1910, an increase of $0.09 per ton. The total cost above materials was $1.06 for the five-year period 1902 to 1906 and $1.18 for 1910. The total increase in this cost, therefore, was $0.12 per ton.

With this slight increase in the cost above materials of Bessemer rail ingots should be considered the net change in the cost of making Bessemer pig iron, which has already been discussed. The general conclusion arrived at there was that for the two periods here compared there was probably a trifling decrease in the cost of Bessemer pig iron ($0.01 per ton), although taking the Steel Corporation's average ore costs for the year 1910 as a basis, an increase of $0.32 might be figured.

For the particular Bessemer ingots here under consideration the net quantity of pig iron and scrap required to produce a ton of ingots was 1.06 tons in 1910. According as the changes in pig-iron costs are taken as $0.01 decrease or $0.32 increase, the change on account of this item would be $0.01 decrease or $0.34 increase per ton of ingots.

Adding to these last two results the increase in cost above materials of these ingots, namely, $0.12 per ton, would give the total change in cost of production as $0.11 per ton increase or $0.46 per ton increase, respectively.

These computations relate, of course, simply to the above comparison, which is between the five-year period 1902 to 1906 and the year

1910. As already stated (p. 85), however, the present (1912) net cost of production of pig iron is undoubtedly distinctly lower than in 1910. Hence, there is no doubt that the net cost of producing Bessemer ingots is somewhat lower now than for the five-year period 1902 to 1906.

HEAVY STANDARD RAILS.—The most important single finished product of the rolling mill is rails. The cost of rolling them (as distinguished from the material used) does not depend, of course, upon the quality of the steel, but (volume of tonnage being the same) upon the weight per unit of length and the section. The most important kind of rails are heavy standard or T rails, used for steam railways.

A comparison of the cost above materials of heavy standard rails at two of the largest rail plants of the Steel Corporation for the five-year period 1902 to 1906 with the year 1910 is shown in the following table:

TABLE 24.—COMPARISON OF BOOK COST PER GROSS TON OF HEAVY BESSEMER RAILS AT TWO PLANTS OF THE STEEL CORPORATION FOR 1902–1906 WITH 1910.

Items of cost.	1902–1906 (5,944,409 tons).	1910 (923,651 tons).
Ingots	$16.94	$17.86
Labor	1.01	1.14
Fuel	.10	.17
Other operating	.94	1.06
Works cost[1]	18.90	20.23

[1] This does not include any allowance for "additional costs" shown on profit and loss accounts. (See pp. 10 and 31.)

As repeatedly explained (see p. 87), no attention is paid here to the book cost of the ingots used, inasmuch as the question is simply one of differences in cost above materials.

This cost is shown in the items of labor, fuel, and other operating expenses. The average labor cost for the five-year period 1902 to 1906 was $1.01 per ton of rails, as compared with $1.14 for 1910, an increase of $0.13 per ton. The cost of fuel showed an increase from $0.10 for the five-year period to $0.17 for the year 1910, or $0.07 per ton. Other operating expenses increased also, namely, from $0.94 for the five-year period to $1.06 for the year 1910, or $0.12 per ton. The total cost above materials increased, therefore, from $2.05 per ton to $2.37, an increase of $0.32 per ton of rails.

This higher cost above materials for rails is partly due, at least, to the fact that more care is taken in making them in accordance with the recent changes in contract specifications for rails, involving slower "breaking down" of the ingot in the blooming mill, increased cropping of the blooms, and increased care in finishing and inspecting. The increase in cost for these reasons corresponds to an improvement in quality, and, if it could be accurately determined, might fairly be taken account of in the increase in cost above materials.

Considering now the net cost of the raw material, reference is made to the statements regarding the change in cost of ingots in 1910 as compared with the five-year period 1902 to 1906 (see p. 87), namely, an increase of $0.11 per ton or of $0.46 per ton, according to the average ore cost used (pp. 84 and 85).

The net quantity of steel used for the rail plants here under consideration was 1.02 tons per ton of rails produced. Applying this factor to the increases, respectively, mentioned above, the increase for computed cost of material in rails are, respectively, $0.11 and $0.47.

Combining these results with the increase in cost above materials shown above, namely, $0.32 per ton, gives a net increase in each case, namely, $0.43 and $0.79 per ton of rails. So far as these data are typical, therefore, the computation of net cost shows a comparatively small increase in the cost of rails in 1910 as compared with the five-year period 1902 to 1906.

As repeatedly noted (see p. 79), however, there is no doubt that the cost of ore at the present day (1912) is distinctly lower than in 1910, and hence the costs of pig iron, Bessemer steel, and rails are undoubtedly somewhat lower also than they were in the five-year period 1902 to 1906.

OTHER ROLLED PRODUCTS.—If the net cost of Bessemer rails is lower to-day than in the five-year period 1902 to 1906, there is no doubt that the same is true of billets and probably also of other heavy rolled products made from Bessemer steel. As for the lighter rolled products, the Bureau has no satisfactory data, but if there has been a general increase in costs above materials for all rolled products it is quite likely that for some of them, especially those requiring much labor, there has been and is to-day a distinct increase over the average for 1902 to 1906. For some of the lighter rolled products there have been technical improvements and labor-saving devices of sufficient importance to counteract any tendency to increase which may have existed for certain items of conversion expense.

CHAPTER VII.

COSTS OF THE STEEL CORPORATION IN 1910.

Section 1. Distinction between Steel Corporation's book costs and integration costs.

This chapter of the report deals with costs of the Steel Corporation alone for the year 1910, for the chief raw materials, and for typical finished products.

As already shown (p. 8), the unique character of the Steel Corporation and its dominating position in the industry make the subject of its costs of production a matter of public concern.

All the considerations noted in preceding chapters as to the necessity for revision of costs, owing to the effect of legal organization, intercompany transactions, arbitrary transfer prices, etc., apply with especial force in the case of the Steel Corporation, which is a holding company with a large number of constituent and subsidiary companies, and which, moreover, is the only steel-making concern with extensive railroad properties.

The industrial activity of the Steel Corporation covers not only the mining of iron ore and of coal and the making of coke, but also the transporting of ore by both rail and Lake, while its iron and steel manufacturing enterprises cover the making of pig iron, steel, and most of the various lines of rolled products, besides some more elaborated commodities, such as tin plate, manufactures of wire, etc.

As to organization, its ore business is conducted by a distinct company, and likewise the business of its several railroads, its ore fleet, and its several coal and coke producing enterprises, while its iron and steel manufacturing business is divided up among numerous companies, most of which are severally engaged in the production of iron, steel, and numerous finished products of steel.

These several companies have an independent legal existence, and are held together as an industrial unit through the ownership of their stock by the Steel Corporation, which is simply a holding company. The natural consequence of this independent existence of these several producing, transporting, and manufacturing companies is that each one of them has, and necessarily must have, its own separate financial accounts, cost accounts, etc., and these accounts, at least in most cases, have had a continuous existence from a time prior to the formation of the Steel Corporation. Even where prior to the organization of the Steel Corporation these manufacturing companies controlled ore-mining property and indirectly were engaged in the production of ore, this was always done, at least for the districts using Lake ore, through a separate company. Thus, the consolidation of the various ore companies controlled by the Steel Corporation under a central direction, as at the present time, produced no change in the manner of accounting.

Owing in part to this legal organization and in part to a more or less natural separation of ore mining, ore transportation, and coal and coke production from the making of iron and steel products, the costs of production in these several branches were formerly and are still generally treated as independent operations. The cost of a product is always considered by the Corporation as the cost of the product to the subsidiary company which makes it, and if this company has to pay a price which includes a profit on the ore it purchases from another subcompany, or on the coke, such price is regarded, and for the financial accounts of the subcompany in question must be regarded, as a cost to that company.

While this is the natural basis for cost accounts for the several constituent companies, it is important to bear in mind that these various constituent companies, whether engaged in ore mining, ore transportation, coal mining, coke making, or the manufacture of iron and steel products, are in fact combined into a single industrial and commercial unit, though by more or less artificial legal arrangements, under a central control with respect to every branch thereof, and that the divisible profits from each of these companies flow or can be directed, if need be, into a single treasury, namely, that of the Steel Corporation.

Now, just as the Steel Corporation in its combined statements of earnings finds it important to distinguish between profits finally realized by sales to outsiders and profits resulting from intercompany sales between its subcompanies (see Part I, pp. 332–344), so in its cost accounting it is important for a full understanding of its position as a producer to know the cost of its products without the inclusion of the profits on materials or transportation services sold by one subcompany to another. For this reason the Steel Corporation keeps a record of such intercompany profits with respect to materials transferred or transportation services rendered in such a manner as to enable it to determine, at least with approximate accuracy, what the cost would be if no such intermediate profits were charged into costs. Thus, for iron ore used in making pig iron the profit on ore transportation, whether by rail or Lake, as near as it can be determined, together with profits accruing from ore docks, besides, of course, the profit on the sale of the ore (i. e., the difference between its cost and price received by the ore company), is duly computed and credited to the item of ore or metallic mixture in the pig-iron cost sheet. The same principle applies to the coke used in making pig iron. These comprise the only important items of intercompany profit that have relation to the costs of pig iron. The subtraction of these items of profit for ore, coke, etc., provides the Corporation with a means of revising the pig-iron cost as shown by the producing company's accounts. The cost thus arrived at may be regarded as a statistical or "integration" cost; that is, a cost which differs from the cost as shown by the books of account of the producing subcompany. It may be correctly called a statistical or integration cost, inasmuch as it relates to the organization as a highly integrated industrial unit and does not correspond, of course, with the books of account of the several producing companies.

It should be reiterated that it is desirable to have the costs stated in this manner because the inclusion of intercompany profits involves, from a statistical point of view, an inconsistent treatment of several stages of production, inasmuch as such profits are not charged or included on the basis of any economic principle, but simply on the basis of legal organization of companies. Furthermore, if at any particular stage of production, as for example ore mining or ore transportation, the profits charged were unreasonably high, such charges would be incorporated in all subsequent costs and enhance them unduly.

In comparing the book costs and the statistical or integration costs as described above, it is of vital importance to discriminate as to the respective margins between these two costs and the selling price in every instance, inasmuch as the margin in the first case constitutes a return to quite a different investment as compared with the second. Take, for example, the book cost of pig iron, which may be assumed at $14 per ton, and the selling price at $16 per ton. The margin here is $2 per ton, and this represents a profit for the investment and risk in the operation of blast-furnace plant only. For this same pig iron the integration cost may be assumed to be $10.50 per ton, which at the same market price leaves a margin or profit of $5.50 per ton, but the total amount of profit corresponding to this margin constitutes the return on the investment, operation, and risk, not only for the blast-furnace plant, but also on ore mines, ore railroads, ore fleets, and docks, besides coal mines and coke works. A much larger return is requisite, obviously, in the second case than in the first, inasmuch as the profit—i. e., the margin between cost and price—must afford a return to more extensive operations, and consequently to a very much larger investment.

The question as to what constitutes a fair return to the capital invested in the case of the above illustration, or under the actual circumstances about to be presented, can not be discussed at this point, but must depend on a careful consideration of the investment and operations in each department of the business and the attendant risks.

Section 2. Character of antecedent profits eliminated from the Steel Corporation's book costs.

Although the Steel Corporation possesses extraordinarily complete records of its business and profits, even it can not figure with absolute precision the exact amount of antecedent transfer profit which is contained in the book cost or company cost of a particular product at a particular plant. Nor can such a calculation be absolutely precise in the case of transportation profits, because with respect to such profits any rule for allocating the total net operating profits to a particular commodity transported must be more or less arbitrary, however reasonable or proper such rule may be. (See p. 72.)

Furthermore, the computations of the Steel Corporation with respect to antecedent transfer profits included in book costs are not absolutely complete. In such a complicated business as that conducted by this great concern there are a great many possible ways for some insignificant items of profit to get into the cost of supplies, repairs, etc., quite apart from the main sources of such profit, namely, the transfer and transportation profits on the chief raw material of pig-iron manufacture, ore, and the transfer profits on coal and coke and on pig iron and manufactures of iron and steel (which are occasionally charged as they pass from one subcompany to another) in succeeding stages of manufacture. Nevertheless, the Steel Corporation does trace out and include such antecedent transfer profit with extraordinary care. In the detailed statements of integration profit, particular items of such profit as small as one-tenth of 1 cent per ton are sometimes shown against minor items of cost.

As already pointed out (see pp. 70–71), the great bulk of the Steel Corporation's transportation profit on ore is derived from (1) the transportation over the Duluth & Iron Range Railroad and the Duluth, Missabe & Northern Railway, from the mining region to the head of the Lakes; (2) over the vessels of the Pittsburgh Steamship Co., from the head of the Lakes to lower Lake ports; (3) from certain docks at lower Lake ports; and (4) over certain railroads running from the Great Lakes to furnaces south thereof, and particularly the Bessemer & Lake Erie Railroad, connecting Conneaut with the Pittsburgh district, and the Union Railroad. In the computations of such transportation profit made by the Bureau, these were the only transportation agencies for which any determination of the profit was attempted. The Steel Corporation, however, is able to take account of certain other transportation profits. Furthermore, the extensive records at the disposal of the Steel Corporation make it possible for the Corporation to determine the transportation profits to be eliminated with greater completeness and accuracy than was possible for the Bureau. However, the results obtained by the Bureau's method and those obtained by the Steel Corporation are very close to each other.

While, therefore, the Steel Corporation's computations of the profits of integration included in book cost are not absolutely complete or precise, they are made with unusual care and accuracy. Moreover, there would be no practical advantage even to the Corporation in making such computations absolutely precise, and as the possible differences in cost depending on such precision would be very small they would be also of little public interest.

Section 3. Steel Corporation's integration cost of Lake Superior ore for 1910.

The total production of Lake Superior ore in 1910 is officially reported at 46,328,743 tons, and the total shipments from the upper Lake ports at 43,442,397 tons. The production of Lake ore by the Steel Corporation in 1910 was 23,010,216 tons, or 49.7 per cent of the total, and its shipments from upper Lake ports were 21,546,824 tons, or 49.6 per cent of the total.[1]

Of the total production of the Mesabi Range, which has by far the largest output, and also the lowest costs, and which consequently is of dominating importance, the Steel Corporation produced no less than 58.5 per cent in 1910. For all the other ranges combined ("Old Ranges") the Steel Corporation's production in 1910 was 32.6 per cent.

The costs of Lake ore, as has already been shown above (pp. 16 and 46), are usually stated at lower Lake ports, where the ore is generally sold, and include, therefore, important items of freight for both rail and Lake transportation. The Steel Corporation's position as one of the principal ore carriers both by rail and Lake has already been stated (pp. 70–74), with the Bureau's computation of the total amount of these profits as well as the average rate of profit per ton of total deliveries at lower Lake ports. In its computations of the statistical or integration cost of its ore at lower Lake ports, the Steel Corporation does not, as already stated, take any account at all of the profits which it receives from the transportation of ore for other concerns.

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[1] The total production of Lake ore and the production of the Steel Corporation, by ranges, for the year 1910 are shown in the following table:

Ranges.	Production of Steel Corporation.		Total production.
	Gross tons.	*Per cent.*	*Gross tons.*
Mesabi	17,875,059	58.5	30,576,409
Vermilion	1,338,110	96.2	1,390,360
Gogebic	1,817,598	38.3	4,746,818
Marquette	792,539	17.1	4,631,427
Menominee	1,186,910	23.8	4,983,729
Total Old Ranges	5,135,157	32.6	15,752,334
Grand total	23,010,216	49.7	46,328,743

AVERAGES FOR CORPORATION'S TOTAL LAKE-ORE PRODUCTION.—The following table for the cost of the Steel Corporation's ore at lower Lake ports in 1910 is shown in the same summary form as used in previous statements of book cost (pp. 16 and 46), with two additional columns showing, respectively, the items of transportation profit eliminated and the resultant integration cost:

TABLE 25.—STEEL CORPORATION'S BOOK COST PER GROSS TON OF LAKE ORE AT LOWER LAKE PORTS, AS SHOWN BY PRODUCING SUBCOMPANIES' COST STATEMENTS, APPROXIMATE INTERCOMPANY PROFITS INCLUDED THEREIN, AND NET INTEGRATION COST, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

[23,010,216 tons.]

Items.	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).
Labor	$0.35	....	$0.35
Other operating	.52	....	.52
Royalty	.34	[1]	.34
Mine cost	1.21	....	1.21
Rail freight	.74	$0.34	.40
Lake freight	.75	.14	.61
Total lower Lake ports	2.70	.48	2.22
General charges	.18	....	.18
Total	2.88	.48	2.40

[1] Intercompany royalty $0.002.

The average cost of Lake ore at lower Lake ports, as shown by the ore company's books, was $2.88 per ton. This cost includes, as shown in the second column of the table, items of intercompany profit aggregating $0.48 per ton, which went to the railroad and vessel companies transporting the ore. The actual amounts of profit corresponding to these profits per ton constituted, so far as this part of the ore traffic is concerned, the total return to the investment in such transportation agencies.

The chief part of this intercompany profit is found in the profits from rail freights. These profits average $0.34 per ton in a total average freight charge of $0.74 per ton. The net cost of the rail freight averaged, therefore, only $0.40 per ton. This is the average profit based on the total ore shipments of the Corporation from the Lake region. On that part of the tonnage hauled by the railroads of the Steel Corporation the average was, of course, much higher because out of the total tonnage shipped probably not more than three-fifths was hauled by the Steel Corporation's railroads. On its own ore, hauled by its own railroads, the Steel Corporation's railroad profit was probably about $0.45 per ton. (See p. 97.)

Effective November 30, 1911, the Steel Corporation's subsidiary railroads in the Mesabi and Vermilion districts reduced the long established rates by 20 cents per gross ton on the ore from the Mesabi Range, and from 30 to 40 cents per gross ton on the ore from the Vermilion Range. This, of course, will have a decided effect in reducing the book cost of ore at lower Lake ports, but has no effect on the integration cost computed in the above manner.

The average profit from Lake transportation was much smaller, namely, only $0.14 per ton in an average cost of $0.75 per ton. The net cost for Lake freight, therefore, averaged $0.61 per ton. If the Steel Corporation had carried all of its own ore, the rate of profit per ton probably would have averaged considerably higher. The proportion of its ore shipments by boats of other carriers in 1910 was a little over one-third of its total shipments.

The average cost of transporting the ore from the mines to lower Lake ports was thus reduced from $1.49 per ton to only $1.01 per ton. The resulting profit of $0.48 per ton constituted the entire return from this part of the ore traffic on the investment in the railroads and Lake vessels, which traffic was, of course, the chief part of their transportation business. However, this, as shown elsewhere, was a very large and indeed unreasonable profit. (See p. 72.)

No other items of book ore cost were affected by intercompany profits except royalties. The intercompany royalties were, however, too small to affect the average cost as stated in cents per ton. In this connection it may be noted that the average royalty cost shown in the table, namely, $0.34 per ton, was high on account of the payment of abnormally large royalties on the ore mined under the "Hill" lease. Eliminating both the production and royalty from that lease, the average royalty was only $0.28 per ton. Inasmuch as this lease has been canceled by the Steel Corporation (to take effect Jan. 1, 1915), it is evident that these abnormally high charges are not to be regarded as a permanent factor in the Corporation's ore costs.

The company or book cost of Lake ore at lower Lake ports was thus reduced from an average of $2.88 per ton to only $2.40 per ton, this being, as already noted, a cost which does not include any return to investment in the agencies of ore transportation, in so far as this part of the traffic was concerned.

COMPARISON OF COSTS FOR MESABI AND VERMILION RANGES.—The preceding table shows the book costs less transportation profits for all the production of Lake ore of the Steel Corporation in 1910. Inasmuch as its chief ore production was from the Mesabi Range (see p. 94), while its railroads operated only in the Mesabi and Vermilion Ranges, the costs for the ore of the Steel Corporation for these two ranges are shown in the following table in the same manner.[1]

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[1] For the other ranges practically the only item of profit to be deducted is that from Lake freights, which is the same for the Gogebic as for the Mesabi and Vermilion, and from 2 to 3 cents lower for the other two ranges, on account of lower Lake freight rates from those ranges.

TABLE 26.—STEEL CORPORATION'S BOOK COST PER GROSS TON OF ORE FROM THE MESABI AND VERMILION RANGES, AT LOWER LAKE PORTS, AS SHOWN BY PRODUCING SUBCOMPANIES' COST SHEETS, APPROXIMATE INTERCOMPANY PROFITS INCLUDED THEREIN, AND NET INTEGRATION COST, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

Items.	Mesabi Range (17,875,059 tons).			Vermilion Range (1,338,110 tons).		
	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).
Labor	$0.21		$0.21	$0.57		$0.57
Other operating	.50		.50	.49		.49
Royalty	.34		.34	.39		.39
Mine cost	1.05		1.05	1.45		1.45
Rail freight	.80	$0.39	.41	.99	$0.52	.47
Lake freight	.76	.14	.62	.76	.14	.62
Total lower Lake ports	2.61	.53	2.08	3.20	.66	2.54
General charges	.18		.18	.17		.17
Total	2.79	.53	2.26	3.37	.66	2.71

This table is of particular interest as showing the situation with respect to the cost of production on the chief range of the Lake Superior district (the Mesabi), which is particularly low, and also because the profits earned from transportation by the Steel Corporation are more clearly brought out by taking the particular ranges in which their railroads operate. Of the Corporation's ore production in 1910, 77.7 per cent was from the Mesabi Range.

The low costs of the Mesabi Range are due chiefly to the low mine costs, its total transportation charges being a little over the average. (See also p. 16.) The mine cost for the Mesabi Range was $1.05 per ton in 1910, of which only $0.21 was for direct mining labor. The Vermilion Range, on the other hand, showed an average mine cost of $1.45 per ton, which included a direct labor cost of $0.57 per ton. Its freight charges were even higher than for the Mesabi Range, and its total book cost the highest for any range.

The items of profit included in these book costs for the Mesabi and Vermilion Ranges (except insignificant items of intercompany royalty) were entirely for rail and Lake freight. The average rail freight for the Mesabi Range was $0.80 per ton, and the average freight profit on the total shipments $0.39. This average freight profit is, of course, considerably lower than it would be if all the ore went over the lines of the Steel Corporation. A considerable portion is hauled by the Great Northern. If the profit earned by the Steel Corporation's railroads were averaged over the ore carried by those roads only, the average profit would be approximately $0.45 per ton instead of $0.39 per ton. However, this average transportation profit of $0.39 per ton for the ore shipped from the Mesabi Range had the effect of reducing its net rail freight cost from $0.80 to $0.41 per ton.

The rail freight from the Vermilion Range averaged $0.99 per ton, and the average transportation profit was $0.52 per ton. The ore shipped from this range was handled by the Steel Corporation's railroad (Duluth & Iron Range) exclusively. Deducting the average profit from the average freight charge gives a net cost for rail freight of $0.47 per ton for the ore from the Vermilion Range.

Both the Mesabi and Vermilion Ranges ship their ore to ports at the head of Lake Superior, which all have the same rate to lower Lake ports. Consequently, their Lake freight charges average the same ($0.76 per ton), and also the profits from Lake transportation ($0.14 per ton). The net cost of Lake freight for the ore of these two ranges, therefore, was identical, namely, $0.62 per ton.

Deducting the items of transportation profit from the book cost at lower Lake ports for Mesabi ore ($2.79) gives the net cost of only $2.26 per ton, which is the lowest net cost for any of the ranges.

Deducting in like manner the items of transportation profit from the book cost at lower Lake ports for Vermilion ore ($3.37) gives a net cost of $2.71 per ton, which is the next lowest net cost for any of the ranges.

As repeatedly stated above, it should be remembered that these integrated costs, to the extent that they take out all transportation profit, include no return to the investment in these transportation agencies in so far as they are used for this part of the ore traffic.

Section 4. Steel Corporation's costs of coke for 1910.

The great bulk of the coke of the Steel Corporation is produced in the Connellsville district in beehive ovens, but there are two important subcompanies which make by-product coke. It is only in the case of the by-product coke costs that intermediate profits appear.

Beehive coke.—The beehive coke of the Steel Corporation in 1910 was produced by three companies, two in the Connellsville district, namely, the H. C. Frick Coke Co., and the Hostetter Connellsville Coke Co., and one in the Pocahontas district, the United States Coal & Coke Co. Although the method of cost keeping practiced by these companies did not involve the inclusion of any integration profits, their costs are of importance, and are summarized in the following table.

TABLE 27.—STEEL CORPORATION'S AVERAGE COST PER NET TON OF BEEHIVE COKE IN THE CONNELLSVILLE AND POCAHONTAS DISTRICTS, AS SHOWN BY PRODUCING COMPANIES' COST SHEETS (WHICH DO NOT INCLUDE ANY INTERCOMPANY PROFIT), FOR 1910.

Items.	Connellsville district: H. C. Frick Coke Co. and Hostetter Connellsville Coke Co. (10,241,971 tons).	Pocahontas district: U.S. Coal & Coke Co. (633,680 tons).
Labor	$1.07	$1.06
Other operating	[1].28	[2].40
Depreciation and royalty	.19	.19
Total	1.54	1.65

[1] Includes credits $0.07.

[2] Includes credits $0.08.

The production of the Frick company was so large in comparison with the other two that an average of the total production is very nearly the same as the costs for the Frick company. The cost of labor ($1.07), which includes the cost of labor in mining the coal used, was by far the most important item of coke cost. The "other operating" costs include a great variety of mining and coking expense, besides certain credits to cost, the most important class of which is the rents from dwellings. The Connellsville coking coal is chiefly owned in fee, so that most of the item "depreciation and royalty" for that district is for extinguishment of the coal. In the Pocahontas district, however, royalty constitutes the main part of this item. The total book cost of coke per net ton was $1.54 for the Connellsville district and $1.65 for the Pocahontas district. These costs, as already stated, are also net costs, because no intercompany profits were included therein.

BY-PRODUCT COKE.—A comparatively small tonnage of the coke produced by the Steel Corporation is made in by-product ovens, these coke plants being located at certain steel works.

The following table shows the production of by-product coke at two important works in 1910, which comprises all directly produced by the Steel Corporation in that year:

TABLE 28.—STEEL CORPORATION'S BOOK COST OF BY-PRODUCT COKE PER NET TON AT TWO WORKS, AS SHOWN BY PRODUCING SUBCOMPANIES' COST SHEETS, APPROXIMATE INTERCOMPANY PROFITS INCLUDED THEREIN, AND NET INTEGRATION COST, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

[1,474,447 tons.]

Items.	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).
Coal, including freight	$3.68	$0.34	$3.34
Producing labor	.25		.25
Other operating, less "breeze"	.29	[1]	.29
Rebuilding fund	.05		.05
Cost at ovens	4.27	.34	3.93
Net credit for by-products	.58		.58
Net cost	3.69	.34	3.35

[1] $0.001 only.

The book cost of by-product coke in 1910 at these two important works, after deducting the credits for "breeze" (fine coke not suitable for furnaces) and for the sale of by-products, was $3.69 per net ton. This cost depends chiefly on the cost of coal, which includes, of course, a considerable freight expense for bringing it to the coke plant. This item of cost for coal was $3.68 per net ton of coke produced as against a total book cost of $3.69 for coke produced. The labor and other operating costs include only those at coke ovens, as the labor and other operating costs at the accessory by-product recovery plant are kept separate and deducted from the gross value of the by-products. The rebuilding fund relates to the coke ovens and is substantially a depreciation allowance.

The gross book cost of the coke was $4.27 per net ton. Against this gross cost the net profit from by-products is customarily credited, which amounted to $0.58 per ton of coke. The deduction of these credits leaves a net cost of $3.69 per net ton of coke, as stated above.

In these book costs as shown above there is an item of intercompany profit included in the price of the coal used which accrued to subsidiary coal companies of the Steel Corporation. This intercompany profit averaged $0.34 per net ton of coke produced.

Deducting this item of intercompany profit from the cost of the coal used reduces the coal cost from $3.68 per net ton of coke to $3.34.

As this is the only item of intercompany profit affecting the book cost of coke at these works, the gross cost of coke, at ovens, and the net cost are reduced in exactly the same measure as the cost of the coal used. The final effect of the elimination of this profit is seen, of course, in the net cost of coke, which was reduced from $3.69 to $3.35 per net ton.

These costs represent, therefore, the net or integration costs of this by-product coke, without including any return to the capital invested in the coal mines supplying the coal, in so far as this part of their coal business is concerned.

Section 5. Steel Corporation's integration costs of pig iron in 1910.

The pig iron produced by the Steel Corporation in 1910 was of three principal kinds, namely, (1) Bessemer (produced only at northern furnaces), (2) Northern basic, used for steel making in open-hearth works, and (3) Southern, used partly for foundry purposes and partly for making open-hearth steel.

For these three kinds of pig iron, which include all the grades important for steel manufacture in 1910, the Steel Corporation's production was 52.5 per cent of the total. Its proportion was highest with respect to Bessemer pig iron, namely, 57.1 per cent, and lowest with respect to Southern pig iron, namely, 25 per cent.[1]

Bessemer pig iron.—Bessemer pig iron was the chief kind of pig iron produced in the United States in 1910, and also the chief kind produced by the Steel Corporation. As it is the basis for the cheapest process of steel making (Bessemer), its cost of production is a matter of great interest. Inasmuch as the ore and other metallic materials, however, are charged in the furnace at market prices, which considerably exceed the actual cost delivered at the furnace, it is obvious that there is no means of forming a definite idea from an ordinary company cost sheet of the real cost of making such pig iron. This is a matter of special importance in the case of

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[1] The total production of the Steel Corporation for these three kinds of pig iron is compared with the total production of the same kinds of pig iron in the United States for the year 1910, in the following table:

COMPARISON OF STEEL CORPORATION'S PRODUCTION OF BESSEMER, NORTHERN BASIC, AND SOUTHERN PIG IRON WITH THE TOTAL PRODUCTION OF THE SAME GRADES IN THE UNITED STATES FOR 1910.

Kinds of pig iron.	Total.	Steel Corporation.	Per cent of total.
	Gross tons.	*Gross tons.*	
Bessemer	[a] 10,977,065	6,269,534	57.1
Northern basic	[b] 8,387,231	4,543,177	54.2
Southern	[c] 2,336,716	585,273	25.0
Total	21,701,012	11,397,984	52.5

[a] Bessemer and low phosphorus. [b] Mineral fuel (i. e., other than charcoal). [c] Tennessee and Alabama only.

Bessemer pig iron, because the Bessemer ores which are used are those which command the highest prices (other conditions, such as iron content and physical structure, being similar).

The following summary table shows simply the average furnace cost (see p. 10) for all the Bessemer pig iron (Northern furnaces) produced by the Steel Corporation, as shown by the producing companies' books, the approximate intercompany profits included in the several items of cost, and the net statistical or integration cost for 1910, as shown by the records of the Steel Corporation:

TABLE 29.—STEEL CORPORATION'S FURNACE COST PER GROSS TON OF BESSEMER PIG IRON, AS SHOWN BY PRODUCING SUBCOMPANIES' COST SHEETS, APPROXIMATE INTERCOMPANY PROFITS INCLUDED THEREIN, AND INTEGRATION FURNACE COST, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

[6,269,534 tons.]

Items.	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).
Net metallic mixture	$8.63	$3.68	$4.95
Coke	3.79	.49	3.30
Limestone	.42	.01	.41
Labor	.55	....	.55
Other operating	[1] .50	([2])	.50
Furnace cost [3]	13.89	4.18	9.71

[1] The amount of this item was $0.69 before deducting credit for furnace gas used in other departments, namely, $0.19.

[2] Intercompany profits $0.002 and losses $0.002.

[3] This does not include any allowance for "additional costs," shown on the profit and loss account. (See pp. 10 and 24.)

The furnace cost of Bessemer pig iron, therefore, as shown by the cost sheets of the manufacturing companies of the Steel Corporation, averaged $13.89 for the year 1910. An interesting feature in this furnace cost is a credit item of $0.19 per ton for gas furnished by the blast furnaces to other departments of the plant where the furnaces were located. This, of course, reduced the "other operating" costs from $0.69 to $0.50 per ton, as shown in the table. This book cost of $13.89 includes, as shown in the second column of the table, certain intercompany profits, as already explained above (see p. 91), which went to the subsidiary mining companies and railroad, vessel, and coal and coke producing companies which supplied the raw materials. The amounts of profit corresponding to this intercompany profit per ton constituted, so far as the quantities of material used in making this pig iron were concerned, the entire net remuneration to the investment in such anterior stages of production and transportation.

It will be noted that the greater part of the total intercompany profit ($4.18 per ton) was included in the cost of the ore entering into the net metallic mixture, namely, $3.68 per ton. While the profit included in the cost of ore used would be considerable for any manufacturing company which produced its own ore and entered it on the cost sheets at market prices, in the case of the Steel Corporation it is greatly enhanced by the fact that the antecedent operations and investment of the Steel Corporation are more diversified than those of any other company. On this account, therefore, the deduction of the intercompany profit for the Steel Corporation results in a much lower statistical or integration cost than would be found in any other case. But, on the other hand, this lower cost corresponds to a much greater investment.

This item of $3.68 intercompany profit in the net metallic mixture is substantially the profit on the ore used and corresponds to a profit of $2. 08 per ton of ore in the average price of the ore at the furnace ($4.81). This multiplication of the ore profit is due, of course, to the fact that about 1.8 tons of ore were required to produce a ton of pig iron.

The item of intercompany profit shown against the cost of coke per ton of Bessemer pig iron, namely, $0.49 per ton, is similar in general character, of course, to that for the net metallic mixture already discussed, but relates almost entirely to coke transfer profits. The amount of profit corresponding to this per-ton profit represents, so far as the particular quantity of coke here considered is concerned, the total remuneration to the investment in the anterior processes of mining coal and making coke. Figured on the coke used, this profit item of $0.49 per ton of pig iron corresponds to a profit of $0.44 per net ton of coke.

The only other item of intercompany profit large enough to appear in the table was $0.01 per ton on the limestone used, and requires no especial comment.

Deducting these items of intercompany profit from the respective items of cost gives the integration or statistical furnace costs of production of pig iron.

The item of net metallic mixture is thereby reduced from $8.63 per ton of pig iron to $4.95 per ton. The item of coke is reduced from $3.79 per ton to $3.30 per ton, and the cost of limestone by 1 cent. There are no other changes in the items of furnace cost as shown by the cost sheets combined. The total reduction in the furnace cost is from $13.89, as shown by the producing companies' cost sheets, to an integration cost of $9.71 per ton. This constituted the furnace cost of the Bessemer pig iron produced by the Steel Corporation, without any return to the investment in mining and transporting the ore or mining the coal and making the coke from it.

It should be clearly understood that this average furnace cost of Bessemer pig iron, as shown by the cost sheets of the Steel Corporation, does not include any "additional costs," such as were presented in Chapters III and V of this report. It was pointed out (pp. 10 and 67) that these additional costs, while based on real expenses and real charges to depreciation, were allotted by a somewhat arbitrary rule. The Bureau did not attempt to make a special ascertainment of these items of additional cost in this case. The items shown for the group of large companies in Table 10, namely, $0.82 per ton of Bessemer pig iron, might be used in the present case. If this were added to the furnace cost as shown above, it would give a total book cost of $14.71 per ton, and a total integration cost of $10.53 per ton. If instead of this additional cost an assumed normal charge of $0.50 per ton were added, the total book cost would be $14.39 and the total integration cost $10.21 per ton.

BASIC PIG IRON (NORTHERN).—Although in 1910 the Steel Corportation made much more basic steel than Bessemer steel, its production of Northern basic pig iron was much less than of Bessemer pig iron, because in making basic steel a large part of the metal used consisted of scrap iron and steel. (See p. 28.) While the antecedent transfer profits for the ore used in making basic pig iron are considerably lower than those for making Bessemer, yet, taking into account also the antecedent transportation profits on ore and the transfer profits on coke, the total integration profits included in the company cost sheets are about three-quarters as large as for Bessemer pig iron.

The following summary table shows the average furnace cost for all the basic pig iron (Northern furnaces) produced by the Steel Corporation, as shown by the producing companies' books, the approximate intercompany profits included in the several items of cost, and the net statistical or integration furnace cost for 1910, as shown by the records of the Steel Corporation.

TABLE 30.—STEEL CORPORATION'S FURNACE COST PER GROSS TON OF BASIC PIG IRON (NORTHERN FURNACES), AS SHOWN BY THE PRODUCING SUBCOMPANIES' COST SHEETS, APPROXIMATE INTERCOMPANY PROFITS INCLUDED THEREIN, AND INTEGRATION FURNACE COST, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

[4,543,177 tons.]

Items.	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).
Net metallic mixture	$7.88	$2.60	$5.28
Coke	3.81	.50	3.31
Limestone	.49	.01	.48
Labor	.56		.56
Other operating	[1] .46	([2])	.46
Furnace cost [3]	13.20	3.11	10.09

[1] The amount of this item was $0.67 before deducting credit for furnace gas used in other departments, namely, $0.21.

[2] Intercompany profits $0.003 and losses $0.001.

[3] This does not include any allowance for "additional costs" shown on profit and loss accounts. (See pp. 10 and 29.)

The furnace cost of basic pig iron, as shown by the cost sheets of the manufacturing companies of the Steel Corporation, averaged $13.20 per ton for the year 1910. The other operating costs included a credit item of $0.21 per ton for gas furnished by the blast furnaces to other departments of the plant where the furnaces were located. This, of course, reduced the other operating costs from $0.67 to $0.46 per ton, as shown in the table.

This cost includes, as shown in the second column of the table, certain items of intercompany profits (similar to those for Bessemer pig iron) which went to the subsidiary mining, coal and coke, railroad, and vessel companies. The amounts of profit corresponding to these profits per ton constituted, so far as the quantities of material used in making this pig iron are concerned, the entire net remuneration to the investment in such anterior stages of production and transportation.

As in the case of Bessemer pig iron, the largest item of intercompany profit shown is against the cost of the net metallic mixture, namely, $2.60 per ton. While for this item there might be a considerable profit for any concern which combined the mining of Lake ore with the manufacture of pig iron and entered the ore on its cost sheets at market prices, in the case of the Steel Corporation it is unusually large, on account of the fact that this concern has much more diversified operations and investments in the anterior stages of production and transportation. On this account the deduction of the intercompany profits of the Steel Corporation results in a much lower integration cost than would be found in the case of any other maker of pig iron whose costs were shown in the same manner. While the Steel Corporation's net costs are therefore very low, it must be constantly kept in mind that it has a much larger investment, against which it must set the greater margin of profit which obtains between its net cost and the price of pig iron.

This item of $2.60 per ton of intercompany profit in net metallic mixture is practically all for ore, as in the case of Bessemer pig iron, and corresponds to a profit of $1.34 per ton of ore in the average furnace price of $3.98.

The item of intercompany profit set against the coke cost for basic pig iron is $0.50 per ton. It relates almost entirely to the transfer profits from coke used, and, of course, so far as it is taken out of the cost of coke used in making pig iron, it deprives the anterior processes of mining and producing the coke and coal of any remuneration on such investment. Figured on the coke used, this profit item of $0.50 per ton of pig iron corresponds to a profit of $0.43 per net ton of coke.

An intercompany profit of $0.01 for the cost of limestone was the only other item which was of sufficient amount to affect the statement of integration cost.

Subtracting these items of intercompany profit from the respective items of cost gives the integration or statistical furnace cost.

The cost of the net metallic mixture is thereby reduced from $7.88 to $5.28 per ton, and the cost of coke from $3.81 to $3.31 per ton of pig iron. A similar reduction of 1 cent appears for the cost of limestone. The total reduction in the furnace cost, as shown on the cost sheets, was from $13.20 to $10.09 per ton, the latter being the integration or statistical cost for this basic pig iron.

The integration cost of basic pig iron produced by the Steel Corporation, inasmuch as it contains no intercompany profit, does not include any return to the anterior processes of production, namely, ore and coal mining, coke making, and ore transportation.

It has already been explained above (see p. 104), in connection with Bessemer pig iron, that the Bureau did not attempt to ascertain the exact additional costs which appear on the profit and loss accounts, which should be added to these costs to give the total cost. Probably the item shown for large companies in Table 11, namely, $0.54 per ton of basic pig iron, would be near enough to the facts for present purposes according to that method of allocating such costs. If this were added to the furnace cost as shown in the foregoing table, it would give a total book cost of $13.74 per ton, and a net total integration cost of $10.63 per ton. If in place of this additional cost an assumed normal charge of $0.50 per ton were added, the total book cost would be $13.70 and the total integration cost $10.59 per ton.

SOUTHERN PIG IRON.—In the Birmingham district the technical conditions of producing pig iron are such that ordinarily one company operates directly all departments of the business from the mining of ore and coal to the production of coke, pig iron, steel, and various steel products. The only exception for the Steel Corporation is a small local railroad, the Birmingham Southern, which showed practically no profit from the transportation of materials in 1910. In consequence of this company organization there was naturally little occasion to transfer raw materials or other products from one department of the business to another at a profit above the direct cost of production. For these reasons the costs of the Steel Corporation for Southern pig iron do not contain any intercompany profits of importance. The following combined cost sheet for the Southern pig iron of the Steel Corporation in 1910 is at the same time, therefore, a company cost sheet and an integration cost sheet.

TABLE 31.—STEEL CORPORATION'S FURNACE COST PER GROSS TON OF SOUTHERN PIG IRON, AS SHOWN BY THE PRODUCING COMPANY'S COST SHEETS, WHICH COST DOES NOT INCLUDE INTERCOMPANY PROFITS, FOR 1910.

[585,273 tons.]

	Cost per ton of product.
Net metallic mixture	$2.88
Coke	3.80
Limestone	.19
Labor	.75
Other operating[1]	.95
Furnace cost[2]	8.57

This is a strikingly low average cost. Compared with the average costs of Southern pig iron shown on page 21 (which, however, included some trifling items of intercompany profit), it gives evidence of marked superiority in furnace practice, the use of labor-saving devices, and utilization of by-products. The items most greatly reduced are coke, labor, and "other operating" costs. The better showing with respect to other operating costs is explained chiefly by the fact that a more efficient system of utilizing gas from the furnace resulted in an average credit to cost of pig iron of $0.15 per ton.

In the preceding table of furnace cost no account is taken, of course, of the "additional costs" (from the profit and loss statements of the producing company). It would scarcely be proper to take those shown on page 21 for all Southern furnaces for 1902 to 1906 as typical, because the Steel Corporation has, and all companies which keep careful accounts have, much heavier charges generally on this account than there shown. While the additional costs for the large companies for Bessemer and basic pig iron from 1902 to 1906 were very nearly the average for the Steel Corporation, that concern was not represented in the Southern iron industry at that time. Owing to the Corporation's policy of making substantial provisions of this sort, the additional costs from 1902 to 1906 for the Southern district would undoubtedly have averaged much higher if it had been then, as it is now, the principal producer in that district. A fair allowance for these additional charges for general expense and general depreciation is $0.50 per ton, which would make the total cost of Southern iron $9.07.

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[1] The amount of this item was $1.10 before deducting credit for furnace gas used in other departments, namely, $0.15.

[2] This does not include any allowance for additional costs shown on the profit and loss accounts. (See p. 10.)

COMPARISON OF NET COSTS OF PIG IRON.—For convenience in comparison, the net or integration furnace costs (i. e., exclusive of intermediate profits on transfer and transportation) of the Steel Corporation for Bessemer, Northern basic, and Southern pig iron, for the year 1910 are shown in the following table:

TABLE 32.—COMPARISON OF STEEL CORPORATION'S INTEGRATION FURNACE COST PER GROSS TON FOR BESSEMER, NORTHERN BASIC, AND SOUTHERN PIG IRON, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

Items of cost.	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).		Book cost (which does not include any intermediate profit).
	Bessemer (6,269,534 tons).	Northern basic (4,543,177 tons).	Southern (585,273 tons).
Net metallic mixture	$4.95	$5.28	$2.88
Coke	3.30	3.31	3.80
Limestone	.41	.48	.19
Labor	.55	.56	.75
Other operating	.50	.46	.95
Furnace cost [1]	9.71	10.09	8.57

[1] This does not include any allowance for additional costs shown on the profit and loss accounts. (See p. 10.)

The marked advantage of the Southern pig iron costs, even on a net basis, is evident from the foregoing table. The furnace cost of Southern pig iron was only $8.57 per ton, as against $9.71 for Bessemer and $10.09 for Northern basic; the differences were $1.14 and $1.52, respectively. Of course, from the point of view of quality the Southern ore should be compared with Northern basic and not with Bessemer. On the other hand, however, the Northern pig iron has a great advantage in location with respect to the chief markets of consumption. For market points north of the Ohio River the freights on Southern pig iron are much higher on the average than those for Northern furnaces, and more than offset the advantage in cost of production, as shown above.

The lower costs of Southern pig iron resulted entirely from lower combined costs of the three raw materials. The ore or net metallic mixture of the Southern pig iron averaged only $2.88, as against $4.95 for Bessemer and $5.28 for Northern basic, chiefly due to the very small freight charges involved in getting it to the furnaces. The coke cost of the Southern furnaces, on the other hand, was somewhat higher, namely, $3.80 per ton of pig iron, as against $3.30 for the Bessemer and $3.31 for the Northern basic furnaces. This was due partly to higher costs of coke at ovens, partly to the very much larger quantity of coke required per ton of pig iron. These together more than offset the lower average freight charges in getting the coke (or the coal from which the coke was made) to the furnaces. The cost of limestone was considerably lower for the Southern furnaces, averaging only $0.19 per ton of pig iron as against $0.41 for the Bessemer and $0.48 for the Northern basic furnaces. This was partly due to lower costs of quarrying and of freight to furnace, but also, in an important degree, to the use of Southern ores containing large quantities of lime, which reduced the need for additional fluxing material. Thus the average quantity of limestone used by the Northern furnaces in 1910 was 1,028 pounds per ton of pig iron, as against 675 pounds for the Southern furnaces. There has been a marked change in this respect in recent years. (See p. 23.)

Combining the costs of ore, coke, and limestone, the cost of these three raw materials for the Southern furnaces averaged only $6.87 per ton of pig iron, as against $8.66 for the Bessemer and $9.07 for the Northern basic furnaces.

On the other hand, the Southern furnaces were at a considerable disadvantage in the cost above materials. The labor cost for the Southern furnaces was $0.75 per ton, as against $0.55 for the Bessemer and $0.56 for the Northern basic, and the other operating costs were respectively $0.95, $0.50, and $0.46 per ton of pig iron. The total cost above materials of the Southern furnaces was therefore $1.70 per ton of pig iron, as against $1.05 for the Bessemer furnaces and $1.02 for the Northern basic furnaces. Nevertheless, as shown above, the net furnace cost for Southern pig iron was much lower than either of these two Northern grades, on account of its much lower costs of raw materials combined.

The foregoing table also shows that on the basis of integration cost Bessemer pig iron has an advantage of $0.38 per ton over Northern basic. This advantage depends chiefly on a lower furnace cost of the net metallic mixture after intercompany profits have been eliminated, namely, $4.95 for Bessemer, and $5.28 for basic, a difference of $0.33 per ton. This advantage is partly due to lower costs for Bessemer ores, but also to a lower net cost for freight for the ore going to the Bessemer furnaces. There was not much compensating advantage, evidently, in coke freights for the Northern basic furnaces, as the costs of coke were practically the same. However, as these basic furnaces used a little more coke per ton of pig iron (due to the lower average iron content of basic ores) than the Bessemer furnaces, they probably had a small freight advantage in coke.

Section 6. Steel Corporation's integration costs of ingots for 1910.

The two chief kinds of steel produced in the United States in 1910 were Bessemer and open-hearth steel. The proportions of the Steel Corporation's production to the total production in the United States are shown in the following table:

TABLE 33.—COMPARISON OF THE PRODUCTION OF BESSEMER AND OPEN-HEARTH STEEL PRODUCED BY THE STEEL CORPORATION WITH THE TOTAL PRODUCTION IN THE UNITED STATES, FOR 1910.

	United States.	Steel Corporation.	Per cent.
	Gross tons.	*Gross tons.*	
Bessemer ingots and castings	9,412,772	5,796,223	61.6
Open-hearth ingots and castings	16,504,509	8,383,146	50.8
Total	25,917,281	14,179,369	54.7

While the foregoing table shows the production of both ingots and castings, by far the greater part of it consists of ingots.

Bessemer steel is of two kinds, namely, billet steel and rail steel, both of which were produced in large quantities but the tonnage of which is not reported separately for the United States. The quantity of Bessemer rail ingots produced can be determined very closely, however, from the tonnage of Bessemer rails. The quantity of Bessemer rails produced would indicate that about one-quarter of the Bessemer steel produced in the United States was Bessemer rail steel, and similarly about one-quarter of the Bessemer steel produced by the Steel Corporation was rail steel.

Open-hearth steel is of two kinds, namely, acid and basic. Very little of the former is produced in the United States and hardly any by the Steel Corporation.

BESSEMER BILLET INGOTS.—Most of the Bessemer steel produced is billet steel, which, as already noted (p. 61), is substantially the same as Bessemer rail steel, except that a smaller quantity of manganese is required for billet steel, in consequence of which the cost tends to be a little lower. Inasmuch as the production of Bessemer billet ingots by the Steel Corporation, namely, 4,395,606 tons, was considerably larger than that of Bessemer rail ingots, the costs for the former are a better indication of prevailing conditions of cost.

The following summary table shows the average works cost of Bessemer billet ingots for the Steel Corporation in 1910 together with the intercompany profits included in the items of cost and the integration works cost:

TABLE 34.—STEEL CORPORATION'S WORKS COST PER GROSS TON OF BESSEMER BILLET INGOTS, AS SHOWN BY PRODUCING COMPANIES' COST SHEETS, APPROXIMATE INTERCOMPANY PROFITS INCLUDED THEREIN, AND INTEGRATION WORKS COST, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

[4,395,606 tons.]

Items of cost.	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).
Pig iron and scrap	$15.16	$3.85	$11.31
Manganese	.29	.03	.26
Fuel	.15	.02	.13
Labor	.49		.49
Other operating	.54	.01	.53
Works cost [1]	16.63	3.91	12.72

[1] This does not include any allowance for additional costs shown on the profit and loss accounts. (See p. 10.)

The works cost of Bessemer billet ingots, as shown by the cost sheets of the subsidiary companies of the Steel Corporation, averaged $16.63 per ton.

The above book cost includes items of intercompany profit, which have been already explained (p. 91), going to other subsidiary companies which produced or transported the materials used. These profits per ton, shown in the second column of the table, constituted the total remuneration per ton going to such producing or transportation companies.

Most all of the intercompany profits in these ingots, which aggregated $3.91 per ton, is found in the profit contained in the book cost of pig iron and scrap, namely, $3.85 per ton. This depends almost wholly, of course, on the transfer profits in ore and coke and the transportation profits in ore.

There was a small profit per ton, namely, $0.03, in the item of manganese, which goes back, of course, almost entirely to the same sources (ore and coke).

The profit in the item of fuel, namely, $0.02 per ton, relates chiefly to the transfer profits contained in the cupola coke used.

There were several other very small items of intercompany profit which could be ascertained, which aggregated $0.01 per ton and which are found in the "other operating" costs. These occurred chiefly in connection with molds and stools (used in casting steel), with a small proportion for steam and negligible items for materials.

The deduction of these items of intercompany profit from the respective items of book cost leaves the integration cost in each case.

The book cost of pig iron and scrap is thus reduced from $15.16 per ton of ingots to $11.31. The other changes were small and do not require any further notice.

Deducting the total intercompany profit, namely, $3.91 per ton, from the works cost as shown in the cost sheets ($16.63), leaves an integration works cost of $12.72 per ton of ingots, which is, of course, exclusive of any return to the anterior stages of production, transportation, and manufacture.

No provisions for additional costs appearing in the profit and loss statements are comprised in the cost statement, i. e., general expenses and general depreciation not allocated to costs of products. The Bureau did not ascertain or apportion them for 1910, but the item for such costs shown for large companies in Table 13, on page 57, namely, $0.98 per ton, might be used, although it is undoubtedly too large. This item added to the works integration cost shown in the table ($12.72) would give $13.70 as the total integration cost per ton of Bessemer billet ingots. An additional cost for general depreciation and general expense of $0.60 per ton (including cumulative charges for pig iron) is probably more nearly a normal requirement. (See p. 59). If this be added to the works integration cost, the total integration cost would be $13.32 per ton.

BESSEMER RAIL INGOTS.—Before 1904 practically all steel rails were produced from Bessemer steel, both for the United States as a whole and for the Steel Corporation in particular; but the production in 1910 was about equally divided between Bessemer and open-hearth steel. The cost of production of Bessemer rails, and therefore of Bessemer rail ingots, is a matter of especial interest. In the first place, this process is cheaper; in the second place, most of the rails produced and sold in foreign countries are made by the Bessemer process (either acid or basic).

The following summary table shows the average works cost of Bessemer rail ingots for the Steel Corporation for 1910, as shown by the books of the producing companies, together with the intercompany profits included in the items of cost and the integration cost at works.

TABLE 35.—STEEL CORPORATION'S WORKS COST PER GROSS TON OF BESSEMER RAIL INGOTS, AS SHOWN BY PRODUCING COMPANIES' COST SHEETS, APPROXIMATE INTERCOMPANY PROFITS INCLUDED THEREIN, AND INTEGRATION WORKS COST, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

[1,399,127 tons.]

Items of cost.	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).
Pig iron and scrap	$14.90	$4.66	$10.24
Manganese	.77	[1].01	.78
Fuel	.10	.01	.09
Labor	.52		.52
Other operating	.56	[2].02	.54
Works cost[3]	16.85	4.68	12.17

[1] Loss.

[2] In molds and stools, materials, and steam.

[3] This does not include any allowance for additional costs shown on the profit and loss accounts. (See p. 10.)

The works cost of Bessemer rail ingots, as shown by the cost sheets of the manufacturing companies of the Steel Corporation, averaged $16.85 per ton in 1910.

This book cost includes, however, as shown in the second column of the table, certain items of intercompany profits, as explained above (p. 91), going to other subsidiary companies which produced or transported the materials used. These profits per ton comprised the total remuneration per ton accruing to such producing or carrying companies for such products or services.

Practically all of this intercompany profit relates to the pig iron and scrap used in making the steel, namely, $4.66 out of a total of $4.68. This large profit item goes back, of course, through the pig iron to the raw materials, and consists chiefly of profits on ore and coke and the transportation of ore.

Taking all the Bessemer rail ingot production of the Steel Corporation, the prices at which manganese and other similar metallic additions were charged to the steel works resulted in an intercompany loss instead of an intercompany profit; this loss, however, amounted to a little less than $0.01 per ton of product.

The item of intercompany profit in fuel was only $0.01 per ton, and comprised profits in the cupola coke.

The other items of intercompany profit were very small, and came in the molds and stools (used in casting the steel), materials (in repairs and maintenance), and steam. These profit items totaled only $0.02 per ton of product.

Deducting these items of intercompany profit from the respective items of book cost leaves the integration works cost in each case. Thus, the cost of pig iron and scrap is reduced thereby from $14.90 to only $10.24 per ton of ingots. The other changes in the integration cost do not call for any particular comment.

Deducting the total intercompany profit ($4.68 per ton) from the book works cost of the ingots, reduces it from $16.85 to $12.17 per ton. This constituted the works cost of these ingots, exclusive of any return to the anterior stages of production, transportation, and manufacture.

This works cost, it should be kept in mind, does not allow for any general expenses or general charges for depreciation ("additional cost") appearing in the profit and loss statements of the producing companies and not allocated to particular products. The Bureau did not ascertain or apportion these expenses for the year 1910, but the same additional expense in this case as shown in Table 14, on page 61, for a number of large companies might be used, although it is certainly much too large. This was $1.05 per ton of ingots, and would increase the foregoing works cost as shown on the cost sheets from $16.85 to $17.90 per ton, and the integration cost from $12.17 to $13.22 per ton.

If instead of this amount the estimated normal charge for general expense and depreciation is used, namely, $0.60 per ton (including cumulative charges for pig iron), a lower result is arrived at. This gives a total book cost of $17.45 per ton and an integration cost of $12.77 per ton.

BASIC OPEN-HEARTH INGOTS.—The open-hearth process used by the Steel Corporation is the basic process in the North, and the duplex process in the South. The duplex process consists in first putting basic pig iron through an acid Bessemer converter, chiefly to remove the silicon, and then treating the metal in basic open-hearth furnaces to remove the phosphorus.

The two processes are so different that the costs for each should not be combined. Furthermore, the Northern costs show important items of intercompany profit, while the Southern works, being part of a completely unified company (Tennessee Coal, Iron & Railroad Co.), do not show any such profits in their costs.

TABLE 36.—STEEL CORPORATION'S WORKS COST PER GROSS TON OF BASIC OPEN-HEARTH INGOTS AT NORTHERN WORKS AND AT SOUTHERN WORKS, AS SHOWN BY PRODUCING COMPANIES' COST SHEETS, APPROXIMATE INTERCOMPANY PROFITS INCLUDED THEREIN, AND INTEGRATION WORKS COST, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

Items of cost.	Northern (3,707,749 tons).			Southern (509,007 tons).
	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production).	Company or bookcost(which does not include any intermediate profit).
Pig iron and scrap	$14.03	$3.50	$10.53	$9.36
Manganese	.40	.01	.39	.63
Fuel	.59	.02	.57	.62
Labor	.68	....	.68	.79
Other operating	.75	[1].01	.74	1.49
Rebuilding fund	.31	....	.31	.45
Works cost [2]	16.76	3.54	13.22	13.34

[1] In materials, refractories, fluxes, tools, lubricants, etc.

[2] This does not include any allowance for additional costs shown on the profit and loss accounts. (See p. 10.)

NORTHERN WORKS.—The works cost of basic open-hearth ingots in 1910, as shown by the cost sheets, was $16.76 per ton.

This cost includes large items of intercompany profit as shown in the second column of the table. These, as has already been explained above, represent the total profit earned by other subsidiary companies on the materials, etc., charged in the cost sheet, and constituted, of course, in so far as these quantities of material are concerned, the return to the capital invested in anterior stages of production and transportation.

By far the greater part of the intercompany profit charged against the cost of these ingots relates to the item of pig iron and scrap, namely, $3.50 out of a total of $3.54 intercompany profit per ton. This profit goes back, of course, in part to the transfer and transportation profits on ore and coke, and also to coal transfer profits.

In the manganese used there was a small intercompany profit, averaging $0.01 per ton of ingots. As only a part of these ingots were rail ingots, the cost for manganese was naturally lower than for the Bessemer rail ingots above.

The intercompany profit for fuel averaged $0.02 per ton of ingots. This was chiefly due to the transfer profits included in the cost of coal used for making gas in the "producer" furnaces.

There were various very small items of intercompany profit in the "other operating" costs, aggregating a little less than $0.01 per ton of ingots. These occurred chiefly with respect to materials in repairs and maintenance, fluxes, refractories, tools, and lubricants.

Subtracting these items of intercompany profit from the respective items of book cost leaves the integration cost at works in each case. Thus the cost of pig iron and scrap is reduced from $14.03 to $10.53 per ton. The other changes in particular items of integration cost do not require detailed comment.

Deducting the total integration profit, namely, $3.54 per ton, from the works cost of these ingots, as shown on the cost sheets, leaves an integration cost of $13.22 per ton. This constituted the works cost of these ingots, exclusive of any return to the anterior stages of production, transportation, and manufacture.

This works cost, as already explained in the case of other products, does not include any of the unallocated charges for general expense and general depreciation ("additional cost") appearing in the profit and loss statements of the producing companies. The Bureau, as already noted (p. 104), did not ascertain them for the year 1910; but the average figure given for additional costs of basic open-hearth ingots in Table 6, on page 27, might be used. This was $0.79 per ton of basic open-hearth ingots. The addition of this cost to the foregoing integrated works cost of $13.22 would give a total integrated cost of $14.01 per ton of basic open-hearth rail ingots. On the basis of an estimated reasonable charge for depreciation and general expense this is probably too low. Assuming $0.85 as a normal charge (including cumulative charges for pig iron), the total cost for these ingots at Northern works would be $14.07 per ton.

SOUTHERN WORKS.—As already noted, the cost of open-hearth rail ingots at the Southern works, owing to the character and organization of the Southern iron industry, does not include any intercompany profits. The costs are, nevertheless, of considerable interest for purposes of comparison, particularly with those of the Northern works, which have just been considered.

It is evident that for such a comparison the proper basis is the integration cost of the Northern works; otherwise large intercompany profits would be included in the costs in one case and not in the other.

The costs of pig iron and scrap per ton of ingots at the Southern works was $9.36. This low cost was directly due, of course, to the very low furnace costs of pig iron for the furnaces of the Steel Corporation in this district (see p. 107), namely, $8.57 per ton of pig iron. The actual transfer price was $8.60, mostly for hot metal from the blast furnaces. A considerable quantity of scrap was used—about 21 per cent of the total gross metallic mixture—for which the average price was a little over that of the pig iron (because the percentage of pure iron is higher than for pig iron).

In the cost of pig iron and scrap, therefore, the Southern works had a slight advantage over the Northern, these costs being, respectively, $9.36 and $10.53 per ton of ingots.

The manganese cost for the Southern works was $0.63 per ton of product, or $0.24 higher than for the Northern works, but this was because only a small part of the steel produced at the Northern works was for making rails.

In the cost of fuel the Southern works showed $0.62 per ton of ingots, as against $0.57 for the Northern works, in spite of much lower transfer prices for fuel. Both works used hot pig metal, and the differences in the proportion of scrap used were not very large.

The labor cost at the Southern works averaged $0.79 per ton of ingots, against $0.68 at the Northern works. The additional labor involved by the duplex process is thus apparently reflected in the costs. For the item of labor for melting and converting, however, there was no difference, while for charging the open-hearth furnaces the Southern works had a slight advantage; in both cases the explanation is, perhaps, found in the fact that the Southern works used a somewhat higher proportion of hot metal.

The "other operating" costs aggregated $1.49 per ton of ingots for the Southern works and only $0.74 for the Northern works. Here, again, the general explanation is undoubtedly found in the more complicated character of the duplex process. This, for example, requires a much greater expenditure for steam than a simple open-hearth plant.

The rebuilding fund, which is an item of depreciation, was $0.45 for the Southern works, or $0.14 higher than for the Northern.

The total works cost of the Southern works was $13.34 per ton of ingots, as against $13.22 for the Northern works. In order to make a fair comparison it would be necessary, however, to add something to the manganese cost for the Northern works to put them on an even basis in this respect, because the Southern works make rails only. This necessary addition may be estimated at the difference between the two, namely, $0.24 per ton, which would increase the cost at Northern works to $13.46, as compared with $13.34 for the Southern works. Thus, while the Southern steel works had a great advantage in the cost of its pig iron and scrap, this advantage was almost entirely offset by larger costs for other items.

Neither of these average costs just compared include any allowance for additional costs. Assuming an arbitrary addition to the works costs of $0.85 for the Northern works and of $0.95 for the Southern works (which would be greater on account of the duplex process), the total costs would be $14.07 for the Northern works and $14.29 for the Southern works.

Section 7. Steel Corporation's integration costs of heavy steel rails in 1910.

In recent years, as stated above, there has been a very great increase in the production of rails from open-hearth steel, and to a considerable extent this has meant a substitution of open-hearth rails for Bessemer rails. The technical reasons for this change are not of importance here. It is important, however, to note the fact. It may also be repeated that the great bulk of heavy rails produced in other countries are made from Bessemer steel—either acid or basic—and that these are the kinds of rails which figure chiefly in international trade.

The total production of the Steel Corporation and of the United States for both Bessemer and open-hearth rails during the year 1910 is shown in the following table:

TABLE 37.—COMPARISON OF PRODUCTION OF BESSEMER AND OPEN-HEARTH STEEL RAILS BY THE STEEL CORPORATION WITH THE TOTAL PRODUCTION IN THE UNITED STATES FOR 1910.

	United States.	Steel Corporation.	Per cent of total.
	Gross tons.	*Gross tons.*	
Bessemer	1,884,442	1,134,381	60.2
Open hearth	1,751,359	1,004,565	57.4
Total	3,635,801	2,138,946	58.8

The foregoing table shows the total production of steel rails in each case, including light rails and girder rails, as well as heavy standard rails. As these different kinds of rails have considerable differences in cost, it is necessary to show the costs for heavy standard rails separately. Consequently the tonnages covered by the following cost statements are considerably less than the total production of the Steel Corporation in 1910.

BESSEMER RAILS.—Of the total production of Bessemer rails by the Steel Corporation in 1910 (1,134,381 tons), 923,651 tons were heavy standard Bessemer rails. All of these are covered by the following cost statement, which combines the costs of two rail plants of the Steel Corporation making Bessemer rails, for the year 1910:

TABLE 38.—STEEL CORPORATION'S MILL COST PER GROSS TON OF HEAVY STANDARD BESSEMER RAILS, AS SHOWN BY PRODUCING COMPANIES' COST SHEETS, APPROXIMATE INTERCOMPANY PROFITS INCLUDED THEREIN, AND INTEGRATION MILL COST, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

[923,651 tons.]

Items of cost.	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).
Ingots	$17.86	$4.83	$13.03
Labor	1.14	....	1.14
Other operating	1.23	[1].03	1.20
Mill cost[2]	20.23	4.86	15.37

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[1] In fuel, steam, materials, and provision for rolls.

[2] This does not include any allowance for additional costs shown on the profit and loss accounts. (See p. 10.)

The mill cost of heavy standard Bessemer rails, as shown by the cost sheets of the producing companies of the Steel Corporation, averaged $20.23 per ton in 1910. This cost, as in the case of products already discussed, includes considerable items of intercompany profit (see p. 91), as shown in the second column of the table, going to other subsidiary companies, which produced or transported the materials used, these profits per ton constituting the total remuneration per ton accruing to such producing or transportation companies for their products or services.

All but an insignificant portion of this profit relates to the cost of the ingots used, namely, $4.83 per ton in a total of $4.86 per ton. While this appears as a very large item, it must be remembered that it goes back through ingots and pig iron to the transfer profits on the chief raw materials—ore and coke—and also to the large transportation profits on ore, which have been already discussed. The ingots themselves were transferred to the rolling mills without profit over mill cost, but the intercompany profit naturally is increased in this case because it required more than 1 ton of ingots to produce a ton of rails. (Cf. p. 122.)

The other items of intercompany profit were very small, and aggregated for all other operating expenses only $0.03 per ton of rails. These profits related to fuel, steam, materials, and provision for rolls.

Deducting these items of intercompany profit from the respective items of mill cost leaves the integration cost at works in each case.

The book cost of ingots used is thereby reduced from $17.86 to $13.03 per ton of rails, while the other operating items are reduced from $1.23 to $1.20 per ton of rails. The mill cost of rails, in the same manner, is reduced from $20.23 to $15.37 per ton of rails. This net integration cost excludes any return to anterior stages of production, transportation, and manufacture with respect to the materials used in making these rails.

This integration mill cost, furthermore, does not take any account of the "additional costs" of manufacture which appear in the profit and loss accounts of the producing companies not allocated to particular products. These additional costs were not ascertained by the Bureau for the year 1910, as already stated (p. 104), but the average figure given for additional cost of rails in Table 16, namely, $1.29 per ton, or, say, $1.30, is probably a fair approximation to this cost (including cumulative charges for anterior processes), which, in any case, can not be exactly stated. The addition of this cost to the foregoing integrated mill cost of rails, namely, $15.37 per ton, gives a total integrated cost of $16.67 per ton for these Bessemer rails.

Open-hearth rails.—The total output of open-hearth rails by the Steel Corporation in 1910 was 1,004,565 tons. These were produced at both Northern and Southern mills. Heavy standard rails formed about 85 per cent of the total. The costs for these, as shown on the cost sheets of the producing companies, are given in the following table:

TABLE 39.—STEEL CORPORATION'S MILL COST PER GROSS TON OF HEAVY OPEN-HEARTH RAILS AT NORTHERN AND SOUTHERN PLANTS, AS SHOWN BY PRODUCING COMPANIES' BOOKS, APPROXIMATE INTERCOMPANY PROFITS INCLUDED THEREIN, AND INTEGRATION MILL COST, AS SHOWN BY THE RECORDS OF THE CORPORATION, FOR 1910.

Items of cost.	Northern (530,955 tons).			Southern (323,061 tons).
	Company or book cost.	Intercompany profit (approximate).	Integration cost (exclusive of any return to investment on any anterior stage of production or transportation).	Company or book cost (which does not include any intermediate profit).
Ingots	$18.37	$3.54	$14.83	$14.86
Labor	1.19	....	1.19	1.72
Other operating	1.35	.02	1.33	2.66
Mill cost[1]	20.91	3.56	17.35	19.24

[1] This does not include any allowance for additional costs shown on the profit and loss accounts. (See p. 10.)

As the Northern and Southern mills which made these rails operate under different technical conditions, particularly with respect to cost of materials, the costs of each are shown separately. Those for the Southern mill do not show any integration profits for the reasons already stated (p. 107).

NORTHERN MILLS.—The mill cost of heavy standard open-hearth rails at the Northern mills in 1910, as shown by the cost sheets, averaged $20.91 per ton.

This cost includes large items of intercompany profit (see p. 91) which are shown in the second column of the table, which, so far as the material here in question is concerned, constituted the total return to investment of antecedent producing or transportation companies for their products or services.

Of the total integration profit just mentioned, namely, $3.56 per ton of rails, all but a very small fraction was due to the profit in ingots used, namely, $3.54. This profit goes back, of course, chiefly to the large transfer and transportation profits in ore and the transfer profits in coke used. The ingots themselves were transferred to the rail mill without charging a profit over the costs as shown by the cost sheets, though in one case there was a very small item of freight.

The intercompany profits tend to increase for each stage of production, however, on account of the fact that more than a ton of material is required per ton of product. (Cf. p. 122.) The other items of intercompany profit were insignificant, aggregating only $0.02 per ton of rails. They related to fuel, materials, tools, lubricants, and supplies. These items of profit deducted from the respective items of mill cost give the respective integration mill costs.

The book cost of the ingots used is thereby reduced from $18.37 per ton of rails to $14.83; the "other operating" costs from $1.35 to $1.33. Thus the total mill cost of rails is reduced from $20.91 to $17.35 per ton. This integration cost excludes any profit for the anterior processes of production, manufacture, or transportation so far as the quantities of material used in making these rails are concerned.

This net or integration mill cost, moreover, does not allow for any "additional costs" on account of general expense or general depreciation appearing in the profit and loss accounts of this company and not allocated to particular products. These, as stated elsewhere, were not determined by the Bureau for the year 1910, but a fair approximate figure for open-hearth rails (including cumulative charges for anterior processes) probably would be $1.55 per ton. This added to the integration mill cost stated above would give a total integration cost of $18.90 per ton of these open-hearth rails.

SOUTHERN MILL.—As already stated, the cost of rails at the Southern mill, as shown by the cost sheets, does not contain any items of intercompany profit. (See p. 107.) The Southern mill starts, therefore, with practically an integration cost for ingots used, namely, $14.86 per ton of rails, which may be compared with the integration cost for the Northern mills of $14.83 per ton. The elimination of the intercompany profits in this item for the Northern mills puts them, therefore, on a fairly even basis to start with. The labor and other operating costs of the Northern mills are, however, considerably lower, namely, $1.19 per ton for labor and $1.33 per ton for other operating costs, as against $1.72 for labor at the Southern mill and $2.66 for other operating items. Hence, the total integration mill cost of rails is considerably lower for the Northern mills than for the Southern mill, namely, $17.35 and $19.24 per ton of rails, respectively. The addition of an assumed normal charge for general expense and general depreciation (which must be taken at a higher figure for the Southern than for the Northern plants on account of the duplex process), namely, $1.65, would give a total cost for open-hearth rails for the Southern mill of $20.89 per ton. As a matter of fact the overhead charges for the Southern mill are understood to be higher on account of the low production of this mill as compared with capacity. Taking both these groups on the basis of integration cost plus additional charges, therefore, the Northern mills enjoy an advantage of no less than $1.99 per ton of rails. The question of location with respect to markets is not of so much significance in this case as for pig iron, for example. The South and Southwest is, of course, a good market for rails, while for the export trade the Birmingham district has a superior location compared with the Chicago district, though not any better perhaps than Pittsburgh. There does not appear to be much export demand, however, for open-hearth rails.[1]

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[1] A feature in the elimination of transfer profits, and one to which attention is especially called (because the Bureau's method differs from that of the Steel Corporation; see pp. 70 and 120), is the treatment of scrap. The transfer or integration profit in the ore, coke, scrap, etc., may be regarded from two points of view.

The first, and the one adopted by the Bureau, was that the profit, so to speak, proceeded directly forward with the material as it was used in each successive stage of the business until it reached a finished product. Inasmuch as the profits so carried forward did not diminish in amount, but were, broadly speaking, rated against smaller and smaller tonnages of product on account of the successive reductions due to the gross waste, the rate of profit per ton of product necessarily increased in a corresponding degree. None of the profit, therefore, was cut off as belonging to the waste material recovered—e. g., scrap iron and steel. There is therefore a regular and sometimes marked increase in the integration profit per ton, according to the percentage of waste. As the scrap, which is of course used again, does not carry with it any portion of this integration profit (according to the Bureau's computations), it does not contribute to the integration profit in the material used, where such scrap is added to the primary material, as, for example, to the ore in the blast furnace, or to the pig iron in the Bessemer plant or open-hearth furnace. For a highly integrated steel concern, therefore, the Bureau's method tends to give possibly a slightly lower amount of integration profit for the pig iron and a distinctly lower integration profit for ingots than would otherwise be the case. Consequently, a larger increase in integration profit per ton is found between certain products (e. g., ingots and rails) than if the second method were used.

The second method, which is the one used by the Steel Corporation, is to attribute to the scrap recovered a part of the accumulated integration profits contained in the material used for each particular process. This cuts down, of course, the portion of this integration profit going into the product in question by a corresponding amount and consequently the average per ton of product. But the scrap, of course, is used again in prior processes of production (and sometimes in the same process in the case of steel works); that is, the scrap goes back either to the blast furnace or to the steel works. Inasmuch as it carries with it that portion of the integration profit attributed to it, it tends to increase the integration profit in the pig iron or ingots, respectively, and, hence, to give them still higher integration profits, and consequently lower integration costs. In particular, it may be noted, it tends to diminish the difference in the integration profit between ingots and the heavy products rolled therefrom.

This whole subject is a highly technical one, and chiefly of interest, perhaps, to the accountant. Illustrations of the differences in the effects produced by these two methods can be seen, however, by comparing the relative differences in the integration profits in Bessemer ingots and Bessemer rails, as shown by the Bureau's computations (cf. pp. 61 and 66), with the relative differences for the same products as shown by the Steel Corporation's figures. (Cf. pp. 113 and 118.)

It is unnecessary to discuss the relative merits of these two systems. It is obvious that one which is applicable to a highly integrated concern like the Steel Corporation would have no application at all to one which made pig iron only. Such companies, however, were comprised in the Bureau's cost averages. Hence, the best method for the Bureau was to use that which it actually applied.

CHAPTER VIII.

APPROXIMATE INVESTMENT IN RAW MATERIALS, PLANTS, AND WORKING CAPITAL REQUIRED TO PRODUCE A TON OF BESSEMER STEEL RAILS FROM LAKE ORES.

Section 1. Basis of Bureau's computation.

The Bureau is not prepared in this preliminary report to enter into an extended study of costs in relation to investment, but some approximate and tentative figures for one important steel product may be presented in order to afford the reader a general idea of the investment required and of the significance of the cost data already discussed. For this purpose the Bureau selected standard Bessemer steel rails, and based its computations on a plant assumed to use Lake Superior ores and chiefly Connellsville coke. The results are presented in the form of ranges instead of averages. Owing to the important influence of differences in amounts of production upon average figures of investment per ton, averages should be used only with great discretion. Take, for example, a concern with an investment in a rail mill (exclusive of any steel works or antecedent stages) of, say, $4,000,000, with an output of 500,000 tons of rails per year; such a concern would show an average investment of $8 a ton, whereas if it produced only 350,000 tons its average would be $11.50 per ton.

In preparing this discussion the Bureau had very extensive figures of investment for blast furnaces, Bessemer works, and rail mills, and it is believed that the ranges later presented are fair and substantially reliable for the purposes of the approximate conclusions reached. In the case of the raw materials the data available were of a different character, but the Bureau is of the opinion that the results obtained may be relied upon.

While it is desired to arrive at an investment per ton in order to make a comparison with the profits per ton of steel rails, it will be found more convenient to work with amounts of total investment. For this purpose the Bureau has assumed an iron and steel plant producing steel rails, although such a rail mill would of course ordinarily form part of a more comprehensive plant, producing other products for which, however, it is not necessary to present investment data here.

The Bureau assumed an ore consumption of 1,000,000 tons of Bessemer ore yearly. Owing to the fact, as shown on page 21, that about 1.84 tons of Bessemer ore are required to produce a ton of Bessemer pig iron, 1,000,000 tons of ore would produce 544,500 tons of pig iron. Some rail and other scrap, however, could be used with such pig iron in the manufacture of rails. It would require about 105 to 106 tons of such mixture of pig iron and scrap to make 100 tons of ingots, and about 131 tons of ingots to make 100 tons of rails. In the manufacture of rails, however, there would be a large amount of scrap, a part of which could, as just explained, be used in the manufacture of ingots (the remainder being sold or used elsewhere in the works). On this basis, 544,500 tons of pig iron together with the amount of scrap which could be reworked, would produce, roughly, 555,000 tons of rail ingots, and from 425,000 to 430,000 tons of Bessemer steel rails. These computations are necessarily approximate, depending somewhat upon mill practice. The Bureau has based its later calculations on the lower figure, 425,000 tons.

As stated, such a plant as that in question would require an annual ore supply of, roughly, 1,000,000 tons. Without attempting to fix upon what is a proper reserve supply, a period of 30 years may be taken as a fair basis for this discussion. Figuring on this basis such a concern would require an ore reserve of approximately 30,000,000 tons. The length assumed for the reserve period would of course have a direct bearing on the final result.

In the case of coke there would be required to produce the pig iron (544,500 tons) necessary for this production of rails yearly an annual supply of approximately 629,500 tons. As the yield of good coking coal is about 67 per cent in coke, such a coke supply would call for an annual supply of coal of 939,000 tons; on this basis a 30 years' supply would be 28,170,000 tons.

In the case of limestone rather less than half a ton is required to produce a ton of pig iron. The annual supply of limestone needed would be about 250,000 tons, and a 30 years' supply, roughly, 7,500,000 tons.

In this computation the Bureau has not included anything for transportation investment in railroad, steamship, or dock facilities, because the ownership of such facilities and especially railroads by a steel concern is an exceptional rather than a normal condition; accordingly, the investment finally arrived at will be compared with the average profits for 1902 to 1906, as shown by the margin between price and cost exclusive of transfer profits only.

Having arrived at the total quantities of the various raw and intermediate materials required for the production of 425,000 tons of rails per year, the fixed investment in these various stages will now be considered. An allowance for working capital will be made at one point instead of distributing it to the various antecedent stages.

Section 2. Approximate investment required in raw materials.

LAKE ORE.—As above shown, the rail plant here under consideration has been allowed a reserve of, roughly, 30,000,000 tons of Lake Superior ore. From what is said in Chapter IX, it is reasonably certain that an estimate of $0.10 to $0.15 per ton for ore, taking a reserve comprising both leasehold and fee properties, would be sufficiently large. This is on the basis of estimated values for the period 1902 to 1906 and not on what ore might cost a new concern about to enter the steel business at present. Such an estimate would include improvements, as well as the ore and the leaseholds themselves; but, as just pointed out, it would not include anything for working capital. On this basis, the total ore body under consideration, including improvements, would represent an investment of from $3,000,000 to $4,500,000.

It should be noted that, inasmuch as this discussion relates to a plant making Bessemer steel rails, it would be necessary to have a supply of Bessemer ore, and that in order to acquire a reserve of 30,000,000 tons of Bessemer ore in the Lake region it would probably be necessary to make purchases of mining lands which would contain a large amount of other ore. However, while only the total investment required for a Bessemer rail plant is here under discussion, this should be regarded as a part of a larger integrated enterprise. Consequently, non-Bessemer ores which might be incidentally acquired by such a concern in order to get a Bessemer ore supply for its rail plant would be available for the production of other iron and steel products. Hence, it would not be proper to charge the cost of acquiring these non-Bessemer ores against the Bessemer rail plant.

CONNELLSVILLE COKE.—The average fixed investment of the Steel Corporation in coking coal and coke property, as computed by the Bureau for the period 1901 to 1910, was $8.37 per ton of coke produced, this investment covering coke ovens and mining improvements, as well as a very large supply of choice Connellsville coking coal. This investment is undoubtedly too high to be representative of conditions generally. Taking the large steel companies as they are at present organized, it is reasonable to assume that the Connellsville coking coal has not cost, on the average, over $1,000 to $1,200 per acre, and the original cost of the Steel Corporation's coking coal to its principal coke subsidiary (the H. C. Frick Coke Co.) was very much less than this. However, as the H. C. Frick Coke Co. had acquired a large proportion of its present holdings of coking coal land long before the Steel Corporation was organized, the low figures of earlier years can not be fairly used in this computation.

As a rough average, the yield of good Connellsville coking coal per acre may be set at about 10,000 tons.

On this basis an average investment of $1,200 per acre would be equivalent to, roughly, $0.12 per ton. However, there is a large supply of less expensive coking coal, such, for instance, as that from the Pocahontas district, which is entirely satisfactory for blast furnace coke. Assuming that a large steel concern would have some of this coal as well as that in the Connellsville district, the Bureau is of the opinion that an average cost of from $0.10 to $0.12 per ton for a reserve of coking coal would be reasonable. For the 28,170,000 tons of coking coal required in the case of the plant here discussed, this would mean a total investment in coking coal of from $2,817,000 to $3,380,000. To this should be added the investment required in mining improvements, equipment, and miscellaneous facilities, which may be roughly placed at from $1,000,000 to $1,500,000. The investment in an ordinary coke oven may be placed at from $750 to $1,000 per oven, or, say, from about $1.50 to $2 per ton of coke produced. On this basis it would require an oven investment of, roughly, $1,000,000 to $1,500,000 to produce the annual output of 629,500 tons of coke here assumed to be necessary.

STEAM COAL OR GAS.—Some large steel companies purchase their supply, or the bulk of their supply, of steam and heating coal, or have natural-gas properties to furnish the necessary fuel. Others mine their own coal, and therefore an allowance for such a supply may be included in this computation. For a plant producing 425,000 tons of steel rails yearly, and not having natural-gas property, the annual requirements of such coal would probably be in the neighborhood of 150,000 tons. A 30 years' supply on this basis would be 4,500,000 tons. The cost of such supply, including necessary improvements and equipment, may be roughly approximated at $500,000 to $1,000,000, according to the location, quality, and other conditions. A considerable part of this would be for improvements.

In the case of concerns having a supply of natural gas, the investment would probably be somewhat less. For the purpose of this discussion, however, the foregoing estimates of from $500,000 to $1,000,000 may be regarded as covering this fuel supply for power and heating purposes, regardless of whether coal or gas was employed.

LIMESTONE.—The investment in limestone property is comparatively small per ton of output. The cost of a limestone quarry which would yield the above noted annual requirement (250,000 tons) for a 30-year period may be safely estimated at from not more than $75,000 to $150,000.

Section 3. Approximate investment required in manufacturing plants.

Blast furnaces.—For the determination of an average investment in blast furnaces per ton of production, the Bureau had very complete data. As stated in Part I, it obtained from the Steel Corporation a detailed schedule of all of its manufacturing properties as of January 1, 1908, this distinguishing real estate from plants, and, moreover, listing each particular kind of plant, as, for instance, blast furnaces, Bessemer works, rolling mills for each kind of rolled product, as well as auxiliary plants (such as power plants, shops, and pumping plants) separately. Owing to the fact that the real estate, as well as considerable of the miscellaneous property, such as auxiliary plants, had to be distributed among the different manufacturing departments, it was necessary to make some approximations and allocations of a more or less arbitrary character. It was possible to arrive at very close figures for the construction cost of blast furnaces and accessory plants, taking conditions as they actually existed. The real-estate valuations, however, presented a more serious problem. A considerable number of blast-furnace plants of the Steel Corporation are located on very valuable sites, and in distributing the total site among the various departments of the steel works a very considerable acreage was necessarily allocated to the blast-furnace plant. In several instances the land valuations averaged from $20,000 an acre upward. The original cost of this land was, of course, very much less, and it is a fair question how far, in computing the investment required, the enhanced valuation now claimed should be allowed. Since, however, the Bureau is endeavoring to arrive at a result which will substantially represent actual conditions, it was deemed proper to include these plants with very high values of real estate with those built on much less expensive sites in arriving at a general average.

While it is impracticable in this report to present, or even to describe, in detail the Bureau's computations, it is believed that the results arrived at fairly represent the facts as submitted to the Bureau. It is probable, however, that the resulting averages are somewhat too high because of the very high values for real estate just discussed. Nevertheless, such figures of actual investment are far more conclusive than engineers' estimates, which, however carefully made as to plants, would necessarily be exceedingly arbitrary as to plant sites.

As above stated, the Bureau worked from actual production rather than capacity, and for this purpose it took the average actual output for 1905 and 1906. These were both years of large production, and it seemed fair to use these two years, the production for 1907 for these plants severally not being available, though about the same as in 1906.

It was not desirable to use the low production of 1904 in computing the average investment per ton. On this basis blast-furnace plants of the Steel Corporation representing an average annual production for the two years 1905 and 1906 of nearly 10,000,000 tons of pig iron, or practically the total output of the Corporation in those years, showed an average investment per ton of $10.75. The valuations for individual plants showed, of course, a very wide range—roughly, from $4 to $16 per ton. The average valuation for furnaces of several other companies with a total average production in these years of about 1,000,000 tons was somewhat lower, at $10.05.

Taking all the circumstances into consideration, the Bureau is of the opinion that for a rather close approximation a range of from $8.50 to $11.50 per ton is a reasonable one. On this basis the investment in blast furnaces required to produce 544,500 tons of pig iron (the amount which, as above shown, would be necessary—in addition to scrap—to produce 425,000 tons of Bessemer steel rails annually) would be from $4,628,000 to $6,262,000.

Bessemer steel works.—The investment in Bessemer steel converting plants per ton of product was comparatively small, including its fair proportion of accessory plants and of real estate. Actual average figures computed in substantially the same way as for blast furnaces for 41 different Bessemer steel converters, with an average annual tonnage in 1905 and 1906 of nearly 8,000,000 tons, showed an average investment of $1.85, with an extreme range of from $1.11 to $3.45. As an approximation this average investment may fairly be placed at from $1.50 to $2.50 per ton. As above shown, the Bessemer works should produce, roughly, 555,000 tons of ingots yearly in order to provide for a production of 425,000 tons of steel rails. On this basis the investment required in Bessemer works would be from $832,500 to $1,387,500.

Rail mill.—The approximate investment in the steel-rail mill, including blooming mill, besides accessory plants and a due proportion of real estate for all of these, on the basis of the data obtained from the Steel Corporation and some other large companies, compared with the average annual output for 1905 and 1906 (2,250,000 tons, or roughly 65 per cent of the total production of the country), showed an average of $8.12 per ton. To use a range, however, the investment may fairly be placed at from $7.50 to $10 per ton of production.

Section 4. Average allowance for working capital.

The foregoing investment, it should be remembered, is for plant and property only, and does not include working capital. The Bureau has placed the average amount of working capital required by a concern completely integrated with respect to raw materials and all stages of manufacture (but excluding railroad, vessel, and dock facilities) at not over $15 to $22.50 per ton of steel rails. The average investment of the Steel Corporation in current assets per ton of all finished steel products for the entire period 1901 to 1910 was almost exactly $22.50. This does not take account of the Corporation's production of Portland cement or of some minor products, such as spelter and sulphate of iron, the inclusion of which would, of course, have reduced the per ton average somewhat. The Steel Corporation, however, carries very large inventories of ore. Moreover, it carries a very large amount of cash in banks. The average amount of cash at the close of each year from 1901 to 1910 was, roughly, $58,000,000. This cash item reduced to a per ton basis is considerably higher than the average for the ordinary large iron and steel concern.

The average net current assets for the three of the largest competitors of the Steel Corporation (the Lackawanna Steel Co., the Cambria Steel Co., and the Jones & Laughlin Steel Co.), per ton of finished steel products, over a period of several years, included within the period 1901 to 1910 (representative data for the entire period not being available because of reorganizations or changes in scope of operations), ranged from $15 to $19 per ton. One reason for the higher average for the Steel Corporation is that the Bureau did not make any deduction on account of working assets employed in transportation.

These averages are for all finished steel products collectively, whereas the amounts of working capital required in the production of different products vary considerably. The average working capital required by a completely integrated concern in the production of steel rails would be considerably less than for several other finished steel products of a more elaborated character, and rather less, it is believed, than the average for all steel products collectively. In this rough approximation in this preliminary report, however, it is unnecessary to enter into refinements and to attempt a distribution of working capital between different products. Such an allocation would be more or less arbitrary under any circumstances. The Bureau has, therefore, used the general averages obtained for all products for representative companies, namely, $15 to $22.50 per ton, as applicable to the production of steel rails, although it is reasonably certain that the higher figure is considerably more than is actually necessary.

Section 5. Indicated rates of profit on basis of 1902–1906 costs.

On the foregoing basis the total average investment in fixed property required to produce a ton of steel rails, with a plant capable of an annual production of 425,000 tons, including working assets at from $15 to $22.50 per ton, would be approximately $55 to $80 per ton. This will appear from the following summary:

TABLE 40.—APPROXIMATE INVESTMENT IN RAW MATERIALS (ON BASIS OF 30 YEARS' SUPPLY) AND IN PLANTS AND WORKING CAPITAL REQUIRED TO PRODUCE A TON OF BESSEMER STEEL RAILS.

[Calculations based on a plant with an annual production of 425,000 tons of Bessemer standard rails and using Lake ore and chiefly Connellsville coke. No investment in transportation facilities is here included.]

	Annual average requirement.	Thirty years' supply.	Approximate investment per ton.	Approximate investment (total).	Investment per ton of rails produced.
	Gross tons.	*Gross tons.*			
Lake ore, including mine improvements	1,000,000	30,000,000	$0.10–$0.15	$3,000,000–$4,500,000	$7.06–$10.59
Coking coal	[1] 939,000	[1] 28,170,000	.10– .12	2,817,000– 3,380,000	6.63– 7.95
Mine improvements, equipment, and coke ovens				2,000,000– 3,000,000	4.70– 7.06
Limestone	250,000	7,500,000	.01– .02	75,000– 150,000	.18– .35
Coal or gas for heating and steam, including improvements				500,000– 1,000,000	1.17– 2.35
Blast furnaces and accessory equipment	544,500		8.50–11.50	4,628,000– 6,262,000	10.89–14.73
Bessemer steel works and accessory equipment	555,000		1.50– 2.50	832,500– 1,387,500	1.96– 3.27
Rail mill, blooming mill, and accessory equipment	425,000		7.50–10.00	3,187,500– 4,250,000	7.50–10.00
Working capital [2]				6,375,000– 9,562,500	15.00–22.50
Total				23,415,000–33,492,000	55.09–78.80

[1] Net tons.

[2] This working capital covers the entire business of producing rails from the ore up.

It should be understood, of course, that the above computations are more or less approximate. In particular, it may be pointed out that differences in mill practice might have some influence on the investment in blast furnaces and in Bessemer works. The Bureau is of the opinion, however, that the range in which its final results are stated is sufficiently broad to take account of any probable variations in this respect.

With this information it is possible to have some idea of the significance of the profits on steel rails. Thus the price of standard Bessemer steel rails has been fixed at $28 per ton ever since the Steel Corporation was organized. The average cost of steel rails for 1902 to 1906, as shown on page 66, this making no deduction for transportation profits, was $18.80 per ton. This leaves a profit to be distributed over all stages of investment of $9.20 per ton. On the basis of $55 per ton for this investment such a profit would be equivalent to 16.7 per cent, while on the basis of $80 per ton for the investment it would be equivalent to 11.5 per cent.

It should be repeated that the foregoing computations are necessarily rough and tentative. They serve, however, to illustrate the point repeatedly emphasized throughout this report, that in dealing with integration cost figures—that is, cost figures exclusive of any intercompany or interdepartmental profits—it is necessary to keep constantly in mind the greater investment to which such cost figures correspond. It should also once more be repeated that the question of output so vitally affects the average investment when reduced to a per ton basis that the possibilities of variation are very great. It is believed, however, that the range of from $55 to $80 per ton here arrived at is fairly representative of existing conditions. An allowance of $80 per ton is, however, undoubtedly high.

These calculations, therefore, indicate that a price of $28 per ton for steel rails has been a highly remunerative one. The price policy of large steel companies with respect to steel rails has, moreover, been, on the whole, rather more conservative than their policy with respect to many other finished steel products.

It should also be noted that in the case of an exceptionally well-integrated concern like the Steel Corporation, with extensive railroad facilities as well as a large ore fleet, the return would be still greater. Thus the integration cost for the Steel Corporation for the year 1910, this excluding the profit on transportation facilities as well as transfer profits (but approximating the additional costs in the manner noted on p. 119), was only $16.67 per ton. This leaves a profit from the fixed price of $28 for steel rails of no less than $11.33 per ton. The investment, on the other hand, would be greater than that above given, because of the inclusion of the transportation facilities. Without entering into any computations on this point, it is evident, in view of the excessive profits on transportation, that the profit of the Steel Corporation on standard Bessemer rails on the basis of its 1910 integration costs, and allowing for this additional investment, would be considerably higher than the foregoing range of from 11.5 to 16.7 per cent averaged for the Steel Corporation and some other large companies combined, based on transfer profits only.

CHAPTER IX.

IMPORTANT BEARING OF ORE PROFITS ON COSTS AND PROFITS FOR FINISHED PRODUCTS AND ON COMPETITION.

Section 1. Evidence that profit on ore is excessive.

A comprehensive study of costs in relation to investment, as already stated, is not practicable at this time. Such a study, of course, should also include a comparison of costs with the actual prices realized. In the full text of the report it is intended to take up this matter in such fashion as to indicate for at least some of the leading products the rate of return derived from prices realized, although, owing to the great variety of conditions under which the business of different companies is conducted, any comparison of costs and profits with investment must necessarily be somewhat approximate.

As repeatedly pointed out, the mere statement of costs of production, whether before or after the elimination of intercompany profits, is of very little value in judging the reasonableness of prices or profits by products without first obtaining a more or less definite idea of the investment employed or required in the business. If the conditions and prices throughout the entire industry were competitive, and the transfer prices of ore, coke, and other materials in an integrated concern were never charged into the next succeeding process at more than the open-market price, the margin between the final cost so obtained and the selling price would be of some service. When, however, arbitrary transfer or noncompetitive market prices are used, the margin between such cost and the selling price can not have any presumptive claim to be the real margin of profit. On the other hand, when all intermediate profits are eliminated, the margin between such a net cost and selling price must cover a number of different stages of production, and before judging whether this margin is reasonable or not it is necessary to measure the investment required.

It is desirable, however, at this time to point out one vitally important factor in the situation, namely, the bearing of ore costs and ore profits upon costs and profits for succeeding products. It has already been clearly shown that the cost of raw materials, and particularly the cost of ore, is a factor of cumulatively increasing significance in the successive stages of iron and steel manufacture. This is due to the fact that nearly two tons of ore are required to make a ton of pig iron, and, in turn, that in the conversion of pig iron into steel there is some waste, and so on through the successive processes.

If, therefore, the profit on ore itself be unreasonable, it is obvious that this factor becomes increasingly important in relation to the costs and prices of finished iron and steel products.

It is possible that finished products might be sold under keen competition at prices so low that unreasonable antecedent profits of an integrated concern on ore would be neutralized. But if the price of a finished product as compared with book cost is sufficient to leave a reasonable margin for the investment, that margin may prove to be grossly excessive when the unduly large antecedent profits on ore (or any other material) are taken account of. This consideration assumes added importance because of the fact, to be discussed in a subsequent part of this report, that prices of iron and steel products have not been established by free and natural competitive conditions, but on the contrary have, to a large extent, been artificially controlled by price agreements and understandings of a more or less formal character.

In order to reach definite conclusions on this point it would be necessary to present information as to prices realized from the sale of finished products and extensive data as to investment. These matters can not be taken up at this time. It is, however, important to point out here that excessive profits on ore have a very great significance to steel-making concerns which purchase their ore instead of producing it. Obviously, if the price of ore at lower Lake ports is kept at a figure which includes an undue profit, it tends to handicap competition by forcing those iron and steel concerns which do not produce their own supply to pay excessive prices for this principal raw material, and thus reduces their efficiency as competitors in the steel market.

It is highly important, therefore, to determine, if only in an approximate way, whether the profit on ore has been in excess of a reasonable profit.

In this comparison it will be desirable to refer at first only to the transfer profits on ore, and not to both the transfer and transportation profits combined, since the latter were obtained substantially by only one concern—the Steel Corporation.

As already shown, the average cost (without deducting anything for transportation profit) of Lake ore delivered at lower Lake ports for the period 1902 to 1906 was $2.64 per ton.[1] The average transfer profit on this ore over and above the cost for the same period was $0.66 per ton. This alone is very suggestive of an abnormal profit. However, a fairer comparison is to contrast this profit, not with the cost at lower Lake ports, which included, on the average, $1.41 of rail and Lake freight, but with the mine cost plus certain general charges, which together aggregated $1.23. (See p. 16.) It will be seen that the profit of $0.66 per ton was over 53 per cent of the mine cost. Of course, the true significance of profits can not be determined from their relation to costs, but must be compared with investment. Nevertheless, such a rate of profit per ton in ordinary mining is a rather strong indication that the profits were excessive.

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[1] The average cost for this period as shown by the profit and loss statements, however, was $2.67 per ton. (See p. 18.)

The real test is obtained by comparing this profit per ton with the investment per ton in ore property. On this point precise data can not be presented, but it is possible to present convincing arguments of a general character.

COMPARISON OF TRANSFER PROFIT ON ORE WITH INVESTMENT.—As a first step it is necessary to determine upon the investment required to produce a ton of ore in the Lake region. Taking first the investment of the Steel Corporation, it will be recalled that in Part I the value of the Corporation's ore property in 1901, including the improvements, was computed by the Bureau (on a liberal basis throughout) at $100,000,000, and that accepting this as the equivalent of the investment at that time and adding the subsequent investment in Lake-ore property there was obtained a total investment (not valuation) at the close of 1910 of roughly $134,000,000. The average investment for the ten-year period on this basis was $116,807,884. The Corporation's average production of Lake ore for this ten-year period was 17,648,889 tons. This gives an average ore investment in fixed property per ton of ore produced of $6.62. The investment in current assets in its ore mining was not obtained for the entire period, but from data for the years 1905 and 1910, which are believed to be representative, it appears that this investment was approximately $1 per ton. The total investment of the Steel Corporation in Lake-ore properties, including working capital, per ton of production for the ten-year period may therefore be computed at $7.50 to $7.75 per ton.

On this basis a profit of $0.66 per ton would be equivalent to about 9 per cent.[1] However, such a calculation is immediately ruled out of consideration, for the reason that the average investment of $7.50 per ton thus arrived at is undoubtedly in excess of a necessary or normal investment.

In the first place, the Bureau's valuation of $100,000,000 for the Corporation's ore property in 1901 was shown to have been computed on a very liberal basis throughout, and could easily have been scaled down somewhat. Thus, as shown on page 232 of Part I, the Bureau's computations pointed to a valuation of not over $90,000,000. Indeed, this figure was reached only after very liberal allowances for the value of both fee and leasehold property. While on account of the vast figures of investment there dealt with and because only a rough comparison of investment with capitalization was then attempted, it was deemed proper to allow a round $100,000,000 for the Corporation's ore property, it does not follow that such a valuation should be accepted in the present more particular computations of investment per ton in relation to definite profits.

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[1] It should be noted that this profit of $0.66 was an average for several concerns, and not the profit of the Steel Corporation alone.

A second, and exceedingly important, factor is that the Steel Corporation has undoubtedly adopted a policy of securing control of an unnecessarily large amount of ore property. There can be no doubt that as the iron and steel industry is at the present time conducted the acquisition of extensive reserves of ore by steel concerns is a logical, natural, and possibly desirable development. This means, of course, that these steel companies are carrying a large amount of ore property which is idle, and part of which will be idle for many years. However, as shown in Part I of this report, a disposition was clearly apparent in the operations of the Steel Corporation to acquire unduly large reserves. This was evidenced by its policy from the very beginning, and particularly by its lease of the Great Northern ore properties at an extraordinarily high royalty and under onerous conditions. This view, moreover, is strongly confirmed by the recent announcement of the Corporation of its cancellation of this lease effective January 1, 1915. However, nothing was included in the Bureau's computation in Part I of the investment in ore property for this Great Northern lease except for certain development expenditures. But aside from this Great Northern ore, the Steel Corporation at the close of 1910 had fully 1,200,000,000 tons of other ore in the Lake region. This would be equal to at least a fifty years' supply at the present rate of consumption. While the increasing demand for iron and steel products in this country would point to an increasing rate of consumption, it must be remembered that there is a counteracting tendency of considerable importance, namely, the use of an ever increasing stock of scrap iron and steel (which is much more valuable than ore for the manufacture of iron and steel products).

There can be little doubt that any such enormous reserves are really in excess of what the Steel Corporation actually requires as a protection for its investment in manufacturing plants.

This, it should be noted, is aside from the question whether it is desirable from the standpoint of public policy to permit any one interest to secure any such quantity of ore, even if its manufacturing operations might seem to require it.

However, even if it be contended that this is no more than a reasonable reserve for the Steel Corporation (although the Bureau does not assent to this), it is not reasonable to argue that the Steel Corporation is justified in earning the same rate of profit on its investment in this enormous amount of idle ore property that it would be justified in obtaining on the manufacture of finished materials where its capital was actively employed. Instead, it might fairly be contended that the Steel Corporation should not expect to earn on the nonproductive portion of its ore reserves much more than the actual cost of carrying them, and perhaps no return at all.

A special reason for this is that inasmuch as the Lake Superior deposits are the choicest in the country there is a strong probability, provided present conditions of concentrated control are permitted, that in the future the ore in that region will have an enhanced value, which value will largely accrue to the steel companies that control the bulk of this property. In other words, if a company is allowed to speculate in ore reserves, it ought to rely on such speculative increase in value to yield a return for carrying these properties through the nonproductive period. It is not reasonable or proper that a high return should be earned on these reserves held by large companies while they remain undeveloped. This is the ordinary principle underlying the speculative holding of a natural resource. Thus, an investor who holds a plot of idle land in the city for a speculative rise in prices can not expect to earn much profit on it, or, indeed, any profit on it, during the nonproducing period. If his investment includes both actively utilized real estate and idle lands, similarly he could not reasonably expect to receive on his total investment as high a rate of return as he would ordinarily expect to receive on his utilized properties alone.

Finally, it should be kept in mind that any valuations placed upon the Steel Corporation's ore property in 1901 were influenced to a considerable extent by the marked concentration of control of ore properties and of combinations in price making which had taken place prior to the organization of the Corporation. In other words, the 1901 valuation can not be considered by any means as representative either of investment cost or of a value of the same ore properties under really competitive conditions of ownership and operation.

For these various reasons, therefore, it is certain that an investment of $7.50 per ton of ore produced would be too large to be representative of normal conditions in the industry.

It may be noted in this connection that a comparison of the balance-sheet valuations and ore production about the years 1905 and 1906, for several smaller concerns with an aggregate annual production of roughly 3,650,000 tons, indicated an average investment in fixed property of $2.76, and an average investment in working capital of $0.45, or a total of $3.21 per ton of ore produced. Since, however, these balance-sheet valuations are not themselves conclusive evidence of value, this figure can not be accepted without reserve, although it is probably much nearer a reasonable figure than the indicated valuation of $7.50 per ton for the Steel Corporation alone.

On the basis of, say, $3.25 per ton of output as the total required investment in ore property for a representative steel concern an average profit of $0.66 per ton would amount to over 20 per cent.

Another very rough indication of the average investment in ore property per ton of production, at least so far as leased mines are concerned, may be obtained by comparing the reported bonus payments for a number of leases transferred about 1902 with the production of those mines in 1903. Such an average for 10 mines shows an indicated investment in these leaseholds, per ton of production, of $2.82. While this also is too limited a basis from which to draw final conclusions, together with other evidence it indicates that an average investment in leasehold mining property of $3 per ton of output, this including improvements, might be sufficiently liberal. Adding, say, $0.75 for working capital would give a total investment of $3.75 per ton of production, on which a profit of $0.66 per ton would be equal to 17½ per cent.

In Part I it was shown that the maximum price for fee ore in the ground, as reported to the Minnesota Legislature in 1909, by the delegation from St. Louis County (in which county the great bulk of the iron-ore deposits of Minnesota are located) was 15 cents per ton. It was stated, moreover, that this was the highest price ascertained after inquiry. Various records are available showing transfers of iron ore property in fee from 1899 to 1902 at prices which average only a very few cents per ton, and there is no doubt that an average of 15 cents per ton for a large and representative body of ore, such as an ordinary steel concern would have, would be excessive even for the fee ore. It would undoubtedly be much too high to be representative of leaseholds as they ordinarily run. Assuming, however, that the average investment in a great ore reserve consisting partly of fee mines and partly of leaseholds, and including improvements, would be as much as 10 cents per ton, and reckoning on a supply equivalent to 30 to 35 years' requirements of the steel concern, the indicated investment rated against the annual production would be 30 to 35 times this amount, or $3 to $3.50 per ton. This is probably a liberal computation. The average investment per ton in improvements certainly would not be over $1 per ton, and an average of $0.75 per ton for working capital would be sufficient. On this basis the total investment would be $4.75 to $5.25 per ton of production.

The foregoing rough calculations indicate, therefore, that the average investment required to produce a ton of Lake ore for a concern carrying a 30 or 35 years' reserve is considerably less than $7.50 per ton and probably well under $5 per ton. On the basis of $5 per ton an average profit of $0.66 per ton would be equal to about

13 per cent. On the basis of $4 per ton it would be equal to 16½ per cent.

Owing to the uncertain factors in the problem, instead of assuming a definite rate, such a profit may be regarded as equivalent to from 10 to 15 per cent, with the presumption in favor of the higher rate.

The use of such a range of profit percentages instead of a single figure is, moreover, on the whole, more reasonable when working from a per-ton basis because of the very marked changes in investment per ton which may result from different tonnages of production. For instance, a mine with a total investment of $1,000,000, which produces 500,000 tons of ore a year, would show an average investment of $2 per ton, whereas if it happened to produce only 200,000 tons the investment would amount to $5 per ton. Of course, average figures tend to eliminate extreme results; nevertheless, the variations in production from year to year are sufficiently large to make it somewhat unsafe to base positive conclusions upon a single average figure per ton.

On first consideration it might seem that a profit of 10 to 15 per cent, while liberal, is not unreasonable. It should be repeated, therefore, that such a profit in an ordinary mining business, especially where depreciation charges are provided in costs (and in the case of Lake ore costs the depreciation charges on the whole are undoubtedly high), is a very different matter from a profit of the same rate from manufacturing. The mining business taken collectively is one of notoriously poor returns. A few exceptionally well-located or unusually valuable properties may return an extraordinarily high rate of profit; but a large share of mining enterprises, whether in iron or in other metals, are conducted with a very small profit, and frequently without any profit whatever. A profit of 10 to 15 per cent in the Lake Superior iron-mining business under competitive conditions would be liberal even for selected and well-located producing mines. A profit of any such rate for a very large ore property, including a large proportion of idle ore reserves, is extraordinary. On the investment in mines actually worked the average rate of profit would, of course, be very much greater.

A rate of, say, 10 to 15 per cent in the Lake Superior ore business means, therefore, that while carrying vast supplies of ore in reserve for future use the large ore-producing companies (chiefly steel-making concerns) are, nevertheless, on the average making an exceedingly liberal rate of profit on their entire investment in such reserves during the nonproductive period, while, in addition, they may secure a great increase in profit in the future as a result of a probable increase of ore values if the present highly concentrated control of ore properties is allowed to continue.

COMPARISON OF INCREASE IN LAKE ORE PRICES WITH INCREASE IN COSTS OF PRODUCTION.—There can be no question, therefore, that the average profit of 66 cents per ton on Lake ore shown by the 1902 to 1906 average figures, presented on p. 43, is far in excess of what an average profit would be under ordinary competitive conditions, with more or less scattered ownership of mining property. In fact, under such conditions it is reasonably certain that the average profit on ore for the Lake region as a whole would be a very small amount per ton.

Convincing evidence that the present profits on Lake Superior ore are noncompetitive as well as excessive is, moreover, afforded by a comparison of quoted prices of ore with average ore costs for different periods. While such a comparison can not be regarded as exact, owing to the fact that the ore for which costs are secured may not have been sold at the average prices, nevertheless in the case of Lake ore the base price has been in the main so uniform for particular seasons that such a comparison is of great value. Some idea of the great increase in ore prices since the era of great consolidations in the iron and steel industry (1898 to 1901) is afforded by the following summary of average quoted prices at lower Lake ports for Mesabi Bessemer ore:

1902–1906	$3.57
1898–1899	2.29
Increase	1.28
Per cent increase	56

It is impossible to present comparative lower Lake costs going back to 1898 for any considerable number of mines in the Mesabi Range. Data secured for two very important mines in the Mesabi Range, however, show an average cost at lower Lake ports (including full transportation charge) for the years 1898 and 1899 of $1.98 per ton, and the same mines show an average cost for the period 1902 to 1906 of $2.30 per ton, an increase of $0.32, or 16 per cent.

Taking the years 1898 to 1900, it was possible to get costs for 9,119,011 tons, comprising 10 mines in all. Owing to the fact that there was a "corner" in Lake freights in the year 1900 which resulted in practically doubling that item of cost (from $0.68 to $1.25 per ton), a comparison of lower Lake costs for these two periods would be misleading. Using a normal Lake freight for that year, the total cost at lower Lake ports for this group of mines would have been about $2.08 for the period 1898 to 1900 and about $2.34 for 1902 to 1906, an increase of, roughly, 12 per cent.

It will be seen, therefore, that for the periods compared the increase in the price of Lake Superior ore (56 per cent) was altogether out of proportion to the increase in the cost of production (12 to 16 per cent). The explanation of this is undoubtedly to be found in large part, first, in the concentration of ownership of Lake iron-ore properties in the hands of a very few concerns, and particularly in the hands of the Steel Corporation; and, second, in agreements for the control of ore prices. A discussion of the prices of ore is reserved for a later part of this report. It may be stated here, however, as a notorious and incontrovertible fact, that the price of Lake Superior ore during the greater part of the period 1902 to 1906, and indeed back to 1895, has been established in large measure by agreement among the principal ore-producing interests. It is worth pointing out that in the only year when there was a conspicuous exception to this rule, namely, 1904, the price of Mesabi Bessemer ore fell from \$4 in the preceding season to \$2.87½, with corresponding reductions in the price of Old Range ores. In the next year Mesabi Bessemer ore was quoted at \$3.50 per ton, in 1906 at \$4, and in the boom of 1907 at \$4.75 per ton. Since then there has been a decline.

It is true that the year 1904 was a year of depression in the iron and steel industry, and that inasmuch as this depression set in in the latter part of 1903 it probably would have been reflected in the ore industry even if the producers' agreement had not been abandoned in the season of 1904. Nevertheless, the average prices for 1904 were by no means unremunerative. As shown in the table on page 43, the total average profit on all Lake Superior ore brought down from mines to lower Lake ports in the year 1904 was no less than \$0.36 per ton. This can by no means be considered as a low return.

In view of all the foregoing evidence, there can be no question that the average profit of \$0.66 per ton shown for Lake Superior ore for the period 1902 to 1906 was very largely the result of artificial conditions and is distinctly in excess of a reasonable profit under competitive conditions.

Section 2. Effect of excessive ore profits on competitors buying ore in the open market.

Just how much of the average profit of \$0.66 per ton on Lake ore above shown for the period 1902 to 1906 is in excess of a reasonable profit can not, of course, be stated in the absence of any general agreement as to what is a reasonable return for the Lake ore business as commonly conducted, nor in the absence of more definite information as to investment. If, however, it be assumed that of the total profit of \$0.66 per ton no more than \$0.25 per ton is in excess of a fair profit, this becomes a matter of considerable importance in the manufacture of iron and steel products.

For the period 1902 to 1906 it required on the average about 1.9 gross tons of Lake ores (Bessemer and non-Bessemer) to produce a gross ton of pig iron for the Lake ore-using districts collectively. It follows that if the excess of profit is assumed at \$0.25 per ton of ore it would amount to \$0.47 per ton in the book cost of iron.

Assuming that as much as one-half the average profit was in excess of a reasonable amount, or, say $0.33, this would amount per ton of pig iron to about $0.61.

It is obvious, therefore, that these excessive profits on Lake ore tend directly to handicap effective competition in the production of pig iron and steel by concerns which do not produce their requirements, or the bulk of their requirements, of ore. This policy of maintaining high prices for ore tends, in other words, to put the whole iron and steel market on an inflated cost and price basis to the probable disadvantage of the consumer and to the certain disadvantage of the small nonintegrated producer. There are a number of such producers, especially of pig iron, and the fact that they are able to exist and pay prices for ore which would return any such rates of profit to the producer is an indication of unreasonable profits on finished iron and steel products by at least some steel concerns which produce their own ore. It is true that such integrated concerns do not sell much pig iron and sell very little crude steel on the open market, and it is conceivable that conditions of competition in the sale of finished steel products might be such that these excessive antecedent profits on ore would largely be lost as the result of low sale prices of finished products. That this has been the case in general, however, is clearly discredited by the profits of the Steel Corporation given in Part I, where it is shown that the average rate of profit on the Corporation's total investment (this comparison including profits and investment in transportation) was 12 per cent for the period 1901 to 1910. Any such rate of profit for a concern handling over 50 per cent of the steel business of the country must be considered a very liberal one. Of course, for particular products where unusual conditions of competition were met the results might depart rather widely from this average.

Section 3. Effect of excessive ore profits on costs and profits of finished steel products.

Quite distinct from the effect of excessive ore prices in handicapping competition in the production of iron and steel is the effect of such prices upon costs and profits of finished iron and steel products for the same companies that produce their ore. From the point of view of the consumer, as well as of the independent iron and steel manufacturer, an excessive profit on ore is an important matter. As already shown, $0.25 per ton on a ton of ore means $0.47 in a ton of pig iron. In the conversion of pig iron into steel ingots there is a cumulative increase, while in the conversion of ingots into steel rails there would be a further increase. Starting, therefore, on the assumption that the excessive amount contained in this average profit of $0.66 per ton for Lake ore was $0.25 per ton of ore, this excessive profit finally becomes, as a result of the cumulative process just described, about $0.55 per ton on a ton of steel rails.

If it be assumed that of the total average profit of $0.66 per ton as much as one-half is in excess of a fair profit, the cumulative profits would be materially increased.

It should be repeated that the Bureau in these computations is not attempting to say to just what extent the profit in question is unreasonable, but instead to present information which will permit of individual opinion on this point, and to point out the increasing significance of any such excessive profit in the successive stages of iron and steel manufacture. It is proper to state, however, that the Bureau regards the assumption that $0.25 per ton out of the total average profit of $0.66 per ton on ore is excessive, as an entirely conservative estimate of such excess, and, moreover, regards it as entirely possible that if all the facts were definitely known more than one-half the total average profit of $0.66 might be regarded as in excess of a reasonable return.

Section 4. Effect of excessive ore transportation profits of Steel Corporation.

The foregoing discussion on ore relates only to transfer profits. A further and exceedingly important consideration arises in the case of the Steel Corporation as a result of the very heavy transportation profit. It will be recalled that the average transportation profit for the Steel Corporation on its own ore over its principal ore-carrying railroads and in Lake vessels, as computed by the Bureau for the period 1902–1906, amounted to $0.60 per ton averaged on the total ore deliveries of the Steel Corporation at lower Lake ports. There can be no question that this transportation profit was grossly excessive. Convincing evidence of this is, indeed, afforded by the fact that the Steel Corporation's principal ore roads, the Duluth & Iron Range and the Duluth, Missabe & Northern, have recently reduced their rates by 20 cents per ton for the haul from Mesabi mines to upper Lake ports, which was formerly $0.80 per ton, and by $0.30 to $0.40 for the Vermilion mines, which formerly had rates of from $0.90 to $1 per ton; the rates from both ranges are now $0.60 per ton. Since this reduction in the rate does not involve any reduction in operating expenses, it may be regarded as equivalent to an admission by the Steel Corporation itself that the former rates were to this extent unreasonable. In the Bureau's opinion the present reduced rate of 60 cents per ton is still excessive. This is clearly indicated by the phenomenally low ratio of operating expenses to gross earnings for these ore roads. Thus the 1910 ratio of the Duluth, Missabe & Northern was below 30 per cent, against an average for all railroads in the United States of 66 per cent, while that of the Duluth & Iron Range Railroad was only 36.5 per cent.

Moreover, the rates of the Steel Corporation over its principal railroad south of the Lakes, the Bessemer & Lake Erie, are undoubtedly excessive, while the dockage charges at lower Lake ports are also unduly large. There is no reasonable doubt that of the average transportation profit of the Steel Corporation in the transportation cost of its ore at furnaces of $0.60 per ton at least as large a portion may be regarded as excessive as in the case of the average profit of all companies on ore. In the case of the Steel Corporation, therefore, the excessive ore profit contained in pig-iron costs and in successive stages may be regarded as at least double that due to excessive transfer profits on ore for all companies collectively.

While integration of industry to permit of large-scale operations at minimum costs is undoubtedly desirable, these enormous profits of the Steel Corporation on the transportation of ore present a problem of very great importance. It is obvious that so long as these railroads are owned by the Steel Corporation the excessive profits thus earned on transportation could be used, if necessary, to the very great disadvantage of competitors in the sale of steel products. It is true that owing to price agreements and price understandings in the steel industry, which will be discussed in a later part of this report, these profits have been retained by the Steel Corporation instead of being thus used as a competitive weapon. Nevertheless, the possibility of their being so used is always present.

The situation, therefore, is this: Integration of the steel industry with respect to transportation thus far, instead of working to the advantage of the public in the form of lower costs to all shippers and lower prices, has inured to the benefit of a great combination. On the other hand, to let the Steel Corporation retain this advantage of low transportation cost and to let this work itself out in the form of lower prices might be undesirable, because it would tend to give the Steel Corporation an unreasonable and undesirable advantage over competitors in the sale of finished products.

This situation clearly raises the question whether the interests of the public may not require the segregation of these railroad properties from the Steel Corporation. It might be argued that such a segregation would simply mean that the control of these railroads would remain in the hands of the interests who dominate the policy of the Steel Corporation. Such segregation, however, at least would prevent the transfer of the profits from these railroads to the treasury of the Steel Corporation. It would thus stop what is unquestionably an evil, and that is the imposition of high rates upon competitors' shipments, which puts them at a great disadvantage, while, at the same time, forcing them by reason of this very fact to contribute unduly to the profits of the Steel Corporation on transportation. If the connection between these railroads and the Steel Corporation were dissolved, there would be no inducement to the Steel Corporation as such to desire unreasonable rates. On the contrary, there would be an inducement to keep these rates at a reasonable level. Under this arrangement, moreover, the iron and steel making concerns using these railroads would be substantially on an equal basis so far as transportation is concerned.

While in the case of integration of ordinary manufacturing enterprises it may be entirely proper that the most aggressive concern should reap the benefit of its enterprise, it is unquestionably different in the case of a public utility, such, for instance, as a railroad. Competition in the construction of railroads is often impracticable. Moreover, the important ore railroads of the Steel Corporation were obtained not through superior ability, efficiency, or foresight, but simply through superior command of capital as a result of combination.

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UNITED STATES STEEL CORPORATION

GENERAL INDEX

TO

HEARINGS

BEFORE THE

COMMITTEE ON INVESTIGATION OF UNITED STATES STEEL CORPORATION

HOUSE OF REPRESENTATIVES

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

GENERAL INDEX.

[NOTE.—Separate index to McRae's Report, pp. 4489–4784.]

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62d Congress, 2d Session. } HOUSE OF REPRESENTATIVES. { Report No. 1127.

INVESTIGATION OF UNITED STATES STEEL CORPORATION.

August 2, 1912.—Referred to the House Calendar and ordered to be printed.

Mr. Stanley (for Messrs. Bartlett, Beall, Littleton, McGillicuddy, and himself), from the Special Committee to Investigate Violations of the Antitrust Act of 1890 and other Acts, submitted the following

REPORT.

The undersigned members of the Committee to Investigate Violations of the Antitrust Act of 1890 and other Acts, respectfully submit the following views in answer to House resolution 148, adopted May 4, 1911, which is as follows:

> *Resolved,* That a committee of nine Members, to be elected by the House, be, and is hereby, directed to make an investigation for the purpose of ascertaining whether there have occurred violations by the United States Steel Corporation, or other corporations or persons as hereinafter set out, of the antitrust act of July second, eighteen hundred and ninety, and the acts supplementary thereto, the various interstate-commerce acts, and the acts relative to the national-banking associations, which violations have not been prosecuted by the executive officers of the Government; and if any such violations are disclosed, said committee is directed to report the facts and circumstances to the House.
>
> Said committee is also directed to investigate the United States Steel Corporation, its organization and operation, and if in connection therewith violations of law as aforesaid are disclosed, to report the same.
>
> Said committee shall inquire whether said Steel Corporation has any relations or affiliations in violation of law with the Pennsylvania Steel Company, the Cambria Steel Company, the Lackawanna Steel Company, or any other iron or steel company.
>
> Also whether said Steel Corporation, through the persons owning its stock, its officers or agents, has or has had relations with the Pennsylvania Railroad Company, or any other railroad company, or any coal companies, national-banking companies, trust

> companies, insurance companies, or other corporate organizations or companies, or with the stockholders, directors, or other officers or agents of said companies, or with any person or persons, which have caused or have a tendency to cause any of the results following:
>
> First. The restriction or destruction of competition in production, sale, or transportation.
>
> Second. Excessive capitalization and bonding of corporations.
>
> Third. Combinations created by ownership or control by one corporation, or the stockholders or bond holders thereof, of the stock or bonds of other corporations, or combinations between the officers or agents of one corporation and the officers or agents of other corporations by duplication of directors or other means and devices.
>
> Fourth. Speculations in stocks and bonds by agreement among officers and agents of corporations to depress the value of the stocks and bonds of other corporations for the purpose of acquiring or controlling same.
>
> Fifth. Profits through such speculation to officers or agents of such corporations to the detriment of the stockholders and the public.
>
> Sixth. Panics in the bond, stock, and money markets.
>
> Said committee shall in its report recommend such further legislation by Congress as in its opinion is desirable.
>
> Said committee, as a whole or by subcommittee, is authorized to sit during sessions of the House and the recess of Congress, to employ clerical and other assistance, to compel the attendance of witnesses, to send for persons and papers, and to administer oaths to witnesses.
>
> The Speaker shall have authority to sign and the Clerk to attest subpœnas during the recess of Congress.

Under the original resolution, by the terms of which this committee was empowered to conduct this investigation, it was particularly charged with the duty of determining whether the organization and operation of the United States Steel Corporation was in violation of the Sherman antitrust law. The committee proceeded to diligently inquire into this question, and was eliciting evidence on that subject when the Department of Justice, stimulated by the revelations made in the hearings and relying upon much of the evidence brought out before the committee, instituted a proceeding in the United States court seeking the dissolution of the corporation. The committee carefully considered what, if any, effect such a proceeding would have upon the original purpose and duty of the committee to make a finding as to whether the corporation and its conduct was in violation of the Sherman antitrust law; and the committee unanimously resolved, on the 9th day of December, 1911, as follows:

> The committee has had under careful consideration the objections made by the United States Steel Corporation, through its counsel, to the further prosecution of this investigation. The

> resolution under which this committee is proceeding directs the committee—
>
> First. To inquire into and report as to whether the United States Steel Corporation is in its organization or operations acting in violation of the antitrust law.
>
> Second. To inquire into and report violations of the interstate-commerce acts and amendments thereto, and to the acts relating to national-banking associations.
>
> Third. To inquire into the restriction or destruction of competition by reason of the relations of the United States Steel Corporation and its officers with other companies.
>
> Fourth. The excessive capitalization and bonding of corporations.
>
> Fifth. Combinations created by holding companies, interlocking directorates, and other devices.
>
> Sixth. Combinations to depress the value of stocks and bonds for the purpose of acquiring them.
>
> Seventh. Panics in the bond and stock markets.
>
> And the committee is also directed to recommend such further legislation by Congress as in its opinion is desirable.
>
> The objection made by the counsel for the Steel Corporation to the further continuance of the investigation was based upon the ground that the Government had filed a bill in the courts of New Jersey against the United States Steel Corporation, seeking its dissolution under the antitrust law. As to this objection, it is our unanimous opinion that the committee should continue the investigation as if no proceeding on the part of the United States Government were now pending against said corporation, but not for the purpose of determining the questions involved in the action brought by the Government against the United States Steel Corporation, and any inquiry into the subjects embraced in that action should be made for the purpose of enabling the committee to recommend such further legislation as in its opinion is desirable. Touching all other matters the committee will proceed as heretofore.

The United States Steel Corporation is a confederation of previously existing consolidations.

At the time of the organization of the Steel Corporation, the production of iron and steel by unrelated units—small, separate, and independent concerns—competing one with another in the various branches of the industry, had already been superseded by these consolidations which had obtained a monopoly of many branches of the business, but were not large or powerful enough to control the industry as a whole.

These companies were associated by banking and other connections into "groups." A syndicate organized by J. P. Morgan & Co. finally consolidated these "groups" into the United States Steel Corporation, the securities of the constituent concerns being deposited in the United States Trust Co., and upon that basis the stocks and bonds of the corporation were issued.

PERIOD OF COMPETITION.

For a brief period, roughly speaking, from 1892 to 1897, the manufacture and sale of iron and steel approached a normal, legal, and legitimate status. Prior to this time pools, gentlemen's agreements, and preferential contracts had been almost universal and embraced to a greater or less extent every phase and department of the business. In describing conditions prevailing prior to the formation of the Steel Corporation one of its directors, Mr. Percival Roberts, jr., says: "It was a case of coming together and breaking again. That, I think, was my experience from 1876 to 1900." All the rail makers in America were at various times parties to such agreements, they covered finished and semifinished steel—beams, plates, sheets, axles, structural shapes of all kinds, wire nails, bolts, cotton ties, and articles constructed of iron in every shape and form. (Hearings, p. 431.) Such pools and agreements provided for the restraint of output by allotting a fixed percentage of capacity to each of the contracting plants, and prices were determined in schedules by which all parties covenanted to abide. Competition was restrained or prevented by an infinite variety of devices, too numerous for description here. The Carnegie Co. was at one time under contract not to engage in the bridge business. (MacRae report, 3662.) The Standard Oil interests, under threat of going into the tube business, received rebates on tin plate. The New Jersey Iron & Steel Co. was paid $5,000 per month conditioned upon their making no structural steel, and the Illinois Steel Co. received $150,000 per annum to keep their hands off the manufacture of cotton ties. Steel billets were sold at so much below the market price upon condition that they should not be resold before going through some subsequent stage of manufacture, or when fabricated into finished products not to be sold in competition with like products made by the vender. The parties to these agreements and the inventors of these various and ngenious devices for the artificial increase in price were perfectly cognizant that such schemes and covenants were neither legal nor enforceable, and admit with somewhat surprising candor their thorough appreciation of the fact that they were industrially pernicious or morally wrong.

No man had a more accurate knowledge of the character and effect of such agreements than Charles M. Schwab, president of the Carnegie Co. and subsequently of the United States Steel Corporation. "No man," says he, "has a clearer appreciation than myself of the evil that lurked in the trust scheme. * * * It was founded on misconception and promoted along the lines of self-destruction. Its fundamental principles were the restraint of trade, increase of price, and the throttling of competition—a trinity that would wreck any proposition, business, political, or social."

Aware of the legal and ethical status of these conventions, their existence was often denied and always, as far as possible, concealed. These pools or secret agreements were enforced through a commissioner, who was the custodian of all documents and papers containing the necessary statistical data for prorating allotments of production, the schedules fixing prices, and rules and regulations for settling differences between the high contracting parties. His place of business was known only to those immediately concerned. In 1904, when, as Mr. Temple states, Judge Gary concluded that it was no longer desirable or necessary to have such agreements in the hands of even a single trusted and cautious custodian, and the commissioner destroyed every vestige of evidence which might incriminate himself or his confrères, but continued to discharge the duties of his office for several years thereafter. (Hearings, p. 1730.)

"Remember," said the commissioner, of the plate and structural steel pools, "there was always present the flying off the track of any members of these associations; there was always present the fear that the law might be violated or something illegal done."

> The CHAIRMAN. A fear of that kind?
>
> Mr. TEMPLE. Oh, there is no question about it. I will admit freely that point, so far as I myself am concerned. (Hearings, p. 1722.)

THE ADDYSTON PIPE CASE.

The Associated Pipe Works does not seem to have been so successful in eluding the vigilance of the law. It differed from the plate and structural associations in the details of its operations, but sought the same results by somewhat cruder and less effective means.

In December, 1896, the United States filed a bill in equity in the Eastern District of Tennessee, the complaint being based upon sections 1 and 2 of the Sherman Act, and praying for the dissolution of this concern and the seizure of its goods in transit.

The legality of such contracts was discussed at length in an elaborate decision rendered by Judge Taft, Justice Harlan and Judge Lurton (now Justice Lurton) concurring.

This decision was unanimously affirmed by the Supreme Court in December, 1899.

The legal status of such pools and associations was elaborately discussed both in the Circuit and Supreme Courts. The ingenuity of the defenders of and apologists for monopoly seems to have been exhausted by the able counsel who appeared for the pipe pool in this case. It was urged that if there was any restraint of trade, it was confined to the parties to the agreement; that it was "partial," and not the restraint contemplated or interdicted by the statute; that it was not an unreasonable restraint; that modern business conditions rendered such agreements necessary; in effect, that it operated to "steady" prices, to prevent violent fluctuations and "ruinous competition."

The answer to such excuses for the law's violation was sweeping and conclusive. "Upon this review of the law and the authorities," said the court, "we can have no doubt that the association of the defendants, however reasonable the prices they fixed, however great the competition they had to encounter, and however great the necessity for curbing themselves by joint agreement from committing financial suicide by ill-advised competition, was void at common law because in restraint of trade and tending to a monopoly." (85 Fed. R., 291.) And, again:

> It is certain that if the contract of association which bound the defendants was void and unenforcible at the common law because in restraint of trade, it is within the inhibition of the statute if the trade it restrained was interstate (85 Fed. R., pp. 278–279).

After the decisions in the Addyston Pipe and other similar cases, there was no longer a mere "dread that the law might be violated"; there was the certainty that such associations were flagrantly illegal and it became more and more apparent that their existence could not always be successfully concealed.

> In the latter part of 1896 and the early part of 1897 in particular, there was a rather general abandonment of such combinations. Thus the collapse of the wire-nail and billet pools was soon followed by the disruption of the steel rail pool itself; a number of other similar agreements were also abandoned at least temporarily about this time. (H. K. S. Rept., p. 75.)

For a brief period such agreements, it appears, were partially discontinued or broken by the contracting parties, and many manufacturers of iron and steel sought to conduct a successful business by the methods which generally prevail in smaller and ordinary industrial and commercial operations. It became what the engineer, Julian Kennedy, aptly calls "a buyer's market"; that is, the manufacturer was to a degree dependent upon the preference of the consumer, and the excellence and cheapness of the article offered for sale. Purchasers were again able to obtain bona fide bids from actually competing concerns. (Hearings, p. 5077.) This condition was reflected in the lessening of cost to the consumer and of profits to the producer. To avert this condition, to secure the advantages of the old pools, to prevent or at least effectually restrain competition, and at the same time escape the serious pains and penalties denounced by the Sherman Act, was the delicate and difficult problem at this time confronting the manufacturers of steel.

This hard and intricate task involved vast expenditures and the most radical and sweeping changes in the whole commercial and corporate make-up of this business. Under the advice of the most astute counsel and the ægis of powerful banking institutions, a scheme was finally elaborated which for the time being exceeded the expectations of the most avaricious of its inventors.

Hitherto the output of many separate and distinct concerns had been limited and the price fixed by a commissioner possessing plenary powers to enforce these pooling agreements or punish their infraction. Under the new arrangement it was not necessary to resort to these covert and perilous conventions. Instead of pooling rails or plates produced by numerous plants, *they pooled the plants themselves.* This was accomplished by the simple device of an "exchange of securities," through the organization of holding companies.

CONTROL OF OUTPUT OF SUBSIDIARIES OF UNITED STATES STEEL CORPORATION.

The holders of stocks and bonds of various tube plants, claiming to control about 90 per cent of the country's capacity, turned their securities over to a syndicate formed by J. P. Morgan & Co., and in return therefor received stock in an incorporated consolidation of all these plants, known as the "National Tube Company." (H. K. S. Rept., p. 143.) Or as stated by John W. Gates:

> The National Tube Co. was an acquisition of the principal tube mills of the United States into one concern, whereby they could get a very handsome profit out of the manufacture of tubes, and that had been done by Mr. Morgan.
>
> Mr. BEALL. There had been a combination of those tube mills by which competition had been largely destroyed, resulting in an increased price of their product, had there not?
>
> Mr. GATES. I would say 85 or 90 per cent of the total tube tonnage in the United States was in the National Tube Co. at that time. (Hearing, p. 41.)

An examination of the minutes of these companies establishes beyond doubt that the control of prices and the restraint of competition was the predetermined and definite purpose for which these various and scattered tube mills were acquired and assembled under one corporate control.

On January 15, 1901, just prior to the formation of the United States Steel Corporation, Mr. Converse, then president of the National Tube Co., and afterwards a member of the board of directors of the United States Steel Corporation, declared:

> *It is well known*, the tendency lately so conspicuous to establish a community of ownership or a *unified control* over great industries, as the only means of restraining destructive competition, led to the incorporation of various great companies. (Hearings, p. 4278.)

From 75 to 85 per cent (see Gary, hearings, p. 63, and Gates, hearings, p. 228) of all the wire rod and nail mills of the country hitherto under the control of separate and distinct corporations. and indulging in such competition as was not restrained by the various wire and nail pools, were consolidated into the American Steel & Wire Co.

The American Tin Plate Co. took over the makers of tin plate and secured absolute control of about 73 per cent of the tin-plate business.

The makers of sheet steel formed the American Sheet Steel Co., with 70 per cent of the entire business.

Steel hoops and cotton ties were made by the American Steel Hoop Co., which managed to produce all forms of steel bands and hoops.

The manufacture of bridge and structural steel of all kinds was controlled by the American Bridge Co. In a short time baling and fencing wire, horseshoes, and horseshoe nails, pipes, sheet iron, tin plate, building materials—in fact, almost every conceivable article fabricated from iron or steel—was controlled by some one of these huge consolidations, holding a more or less monopolistic position.

The board of directors of one corporation, capitalized often at millions and hundreds of millions, took the place of the chosen representatives of the old concerns from which they were created, and the chairman of the board of directors or of the finance and executive committees assumed the duties once discharged by the secret commissioner. Pooling agreements, while still maintained, were no longer essential in dictating the price or determining the output. Their few straggling competitors who failed or refused to join these overmastering combinations, as a rule, exerted but little influence upon the industry. The effect of these compact and powerful combinations on the markets was marked and immediate.

EFFECT UPON PRICES.

The American Steel & Wire Co. of New Jersey was organized in January, 1899. In 1898, prior to the formation of this concern, wire nails had been selling at from $1.25 to $1.50 per keg. By June in the same year, the price had reached $2.10 and within eight months thereafter it was raised to $3.20 per keg. The maximum price in 1898 was $1.50; in 1899, it was $2.95, and the next year $3.20. (Hearings, p. 5560.) Wire rods brought $21 per ton in 1898; in 1899 they reached $31.50, and by 1900 $50 per ton. This result is the more surprising when it appears that there was but little difference in the production and demand for nails and rods in 1898 and 1899.

Wire rods, Pittsburgh:	Tons.
Production 1898	1,071,683
Production 1899	1,036,390

(Hearings, p. 5564.)

In three years there was a rise of $1.80 per keg in wire nails, and in 1900 there were produced 7,233,979 kegs of nails, or a profit to the consolidation, assuming the 1898 price to have been fair, of $13,021,162.20. (Hearings, p. 5560.)

Nails, fencing, and other forms of wire are made from wire rods. In 1898 there were produced in this country 1,071,683 tons of wire rods (see p. 5564). In June, 1898, the Pittsburgh price of wire rods was $20 per ton; in January, 1900, this price had risen to $50 per ton, with a total production. 1898 to 1900, of 2,954,372 tons.

The American Tin Plate Co. was incorporated in December, 1898. Commercial tin plate is made by coating steel sheets (black sheets), and these in turn are rolled from sheet bars. Sheet bars and tin plate showed a like increase upon the consolidation of the sheet-steel and tin-plate mills.

In November, 1898, tin plate sold for $2.95 per box. This company was organized in December of that year. By January the same plate sold for $3.34. In 30 days thereafter it reached $4.21½, and from September till the close of the year ir remained stationary at $5 per box. (Rept. Ind. Com., vol. 1, p. 868.)

"MERGER VALUE" CAPITALIZED BY THE UNITED STATES STEEL CORPORATION.

So well satisfied were the syndicates who had evolved this plan for what Mr. Converse calls "community of ownership or unified control over great industries as the only means of restraining destructive competition" that they began to treat this ingenious and illegal device as a lawful institution, no doubt reassured in this position by the failure of the Government to proceed against them, and in their future operations they failed to discriminate between the cost of construction or the intrinsic value of these properties and earning capacity due entirely to "community of ownership and unified control," or "potential value," as James Gayley calls it. This "combination value" of the various companies since acquired by the Steel Corporation has been capitalized as a tangible asset, stocks issued and bonds sold, all based upon this new device, as a perfect and permanent evasion of all laws prohibiting combinations in restraint of trade.

The earning power of the American Steel and Wire, the Tin Plate, National Tube, and other companies was enormously increased by virtue of the complete monopoly which resulted from assembling practically all of the manufacturers of such commodities, as horseshoes, nails, fencing wire, sheet steel, and tin plate for roofing or kitchen utensils, under one control.

The gains incident to the difference in the price of such things sold under competitive and monopolistic conditions were but a small part of the amount actually secured by these companies and by the Morgan-Moore and other syndicates.

To illustrate: If under normal conditions these various plants acting separately could earn 10 per cent, and acting collectively they could earn 100 per cent, then by discarding any form of physical valuation, either the original cost or the cost of reproduction, and taking as their sole standard the new and artificially created earning power, due entirely to the consolidation, and for that reason aptly termed "combination value," then 10 assembled plants were worth 10 times as much with the acquired monopoly of the business as the same 10 plants would have been worth acting separately and in competition. And these immense aggregations were created and capitalized upon that principle; neither in the incorporation of the Steel Corporation nor of the subsidiaries which preceded it, now under discussion, has there been any serious attempt to deny that the greater part of the securities of these companies had any other element of value.

"Everybody knows," said W. H. Moore, of the Moore syndicate, "what they are getting when they get common stock (in the Tin Plate Co.). They know they are not getting anything that represents assets." (Reports Industrial Commission, vol. 1, p. 963; hearings, pt. 63.)

Judge Gary, testifying before the Ways and Means Committee, "guesses" the same thing is true of the Steel Corporation itself.

> Mr. COCHRAN. Of this whole sum, $1,782,000,000, was not $1,000,000,000 at least capitalized profits, as distinguished from original investment?
>
> Mr. GARY. I should have to guess at that; but I should guess yes, including increases in value. (See Hearings Ways and Means Committee, 1908 and 1909; see hearings, pt. 63, p. 240, Appendix.)

The Commissioner of Corporations gives an interesting account of the method by which these companies "capitalized" and recapitalized their profits:

> In the organization of the American Steel & Wire Co. of Illinois, in March, 1898, each $100 of the stock of the Consolidated Steel & Wire Co., one of the constituent concerns (and itself a consolidation of seven plants), received $175 of preferred stock and $175 in common stock of the new company, or $350 of new securities for every $100 of the old. (See Com. Rept., p. 6.)

"A few months later each $100 of the preferred stock of the American Steel & Wire Co. of Illinois received $100 in preferred stock and $60 in common stock of the American Steel & Wire Co. of New Jersey, while each $100 of the Illinois concern's common stock received $120 in common stock of the New Jersey concern. Thus each $100 stock of the old consolidated company became $490 in the stock of the

New Jersey concern. In the final merger of the latter company into the Steel Corporation each $100 par value of the preferred stock received $117.50 in preferred stock of the Steel Corporation, while each $100 (par value) of the common stock received $102.50 in United States Steel common stock. In other words, every $100 par value of the stock of the Consolidated Steel & Wire Co. was finally transmuted into $528.50 par of Steel Corporation securities. (Com. Rept., p. 176.)

The reflections of the commissioner over a like method of capitalization of ore properties applies as forcibly to operating plants. The capitalization of the appreciation in value (of ore) in the absence of competitive ownership presents a problem of far-reaching importance. Assume, for instance, for the purposes of argument, that the Steel Corporation could prove an actual appreciation in its ore property of, say, $100,000,000. This would mean that a considerable part of such appreciation must be attributed to the concentration of control of such property, since under scattered and competitive ownership there is always a tendency on the part of some holders to sell at a very small profit rather than carry their property without a return thereon, and thus keep down values. If it were conceded that such appreciation could properly be capitalized and used as a basis for distributing profits, then there is nothing to prevent further recapitalization, at a still greater appreciation, at some time in the future when the value may be still more greatly influenced by the concentration of control. "In this way, it will be seen, a great concern, like the Steel Corporation, might repeatedly recapitalize its natural [and one may add, other resources], and use this capitalization in such a way as to really conceal its true rate of profit."

Thus, to capitalize and recapitalize this property involves, therefore, as just stated, problems of vital interest to the public." (H. K. S. Rept., p. 325.)

OVERCAPITALIZATION.

In some instances stocks were not "watered" in the ordinary acceptance of that term; they were literally deluged. The cost of constructing or reproducing the several plants constituting the combine was inconsequential as compared with the value of this new device for enjoying with immunity an old and hitherto forbidden privilege—an absolute monopoly in a valuable and necessary article of commerce.

NATIONAL TUBE CO.

"The National Tube Co. was an acquisition of the principal mills of the United States into one concern, whereby they could get a very handsome profit out of the manufacture of tubes, and that had been done by Mr. Morgan." Mr. Gates does not tell us how Mr. Morgan managed to make this handsome profit, but it is easily ascertained from a casual inspection of the organization and operation of this concern.

Before acquiring these plants Morgan & Co. employed Julian Kennedy, of Pittsburgh, a most capable engineer of long experience in the construction and operation of steel works both in America and in Europe and Asia, and instructed him to make a careful estimate of the value of these plants.

> The tube people wanted to get together, as I understand it [says Mr. Kennedy] with a view to ending this condition of affairs [free and unrestricted competition], and they entered into negotiations with J. P. Morgan & Co., of New York, to combine them into a larger company. * * *
>
> The tariff on tubes was $40 per ton, which was practically a Chinese wall, and the tube people were small in numbers for a while and their profits got very abnormal and very fancy, and a great many other people jumped into the tube business. It is a business that is not necessarily very highly organized, and men could get in very quickly and with a small amount of capital, if necessary; so a great many tube plants started. Some of them were small, but all were active, and we got an overproduction, and business became very much demoralized, as I noticed. I had occasion to go around all the tube plants about that time and examine them. * * *
>
> About that time, I think 1898 or 1899—I can not fix the date exactly—it was just prior to the formation of the National Tube Co., whenever that was. I visited all the works and naturally talked with all the people and found them very much discouraged. * * *
>
> Generally it was a buyer's market, as we call it, and the tube people were very much in the blues. * * * The buyer could pretty nearly dictate his own price at that time.
>
> The CHAIRMAN. At whose instance did you do that?
>
> Mr. KENNEDY. In connection with another gentleman employed by Messrs. J. P. Morgan & Co., of New York.
>
> The CHAIRMAN. To appraise the tube works of this country?
>
> Mr. KENNEDY. Not to appraise, exactly.
>
> The CHAIRMAN. To fix a valuation?
>
> Mr. KENNEDY. The works were not bought on that valuation, but to give our opinion as to valuation as a guide to it, as I understood it.
>
> The CHAIRMAN. What was the valuation of the National Tube works at that time? * * * Was it in excess of $19,000,000?
>
> Mr. KENNEDY. I should say not. * * * I only appraised the plants, and considered them as going plants, including the expense of starting and organization, but nothing for good will or possible effects of combination. That was distinctly left out. * * * I simply took the physical value of the plants as going plants, including the cost of construction and cost of starting—the diseases of infancy, which are a part of the cost of construction.

> The CHAIRMAN. Did these plants have any ore or anything of that kind you did not appraise?
>
> Mr. KENNEDY. I think not; we did not consider that, anyway.
>
> The CHAIRMAN. Do you know what per cent of the tube business was included in this organization, approximately?
>
> Mr. KENNEDY. I do not know exactly, but it was nearly all. * * * I should have said 90 per cent, but I would not be positive. (Hearings, pp. 5076-5079.)

The most important companies acquired were the National Tube Works Co., with plants at McKeesport and Pittsburgh, Pa.; and the Riverside Iron Works with plants at Wheeling and Benwood, W. Va., and Steubenville, Ohio. * * * The remaining plants were those of the following companies: Pennsylvania Tube Co., Pittsburgh, Pa.; Oil City Tube Co., Oil City, Pa.; National Galvanizing Works, Versailles, Pa.; Syracuse Tube Co., Syracuse, N. Y.; Delaware Iron Co., New Castle, Del.; Allison Manufacturing Co., Philadelphia, Pa.; Cohoes Tube Works, Cohoes, N. Y.; Ohio Tube Co., Warren, Ohio, and Morristown, Pa.; American Tube & Iron Company, Middletown, Pa., and Youngstown, Ohio; Chester Pipe & Tube Co., Chester, Pa.; Oil Well Supply Co., Pittsburgh, Pa.

These smaller plants entering the consolidation had an annual capacity of about 650,000 tons of iron and steel wrought pipe. * * * The aggregate capacity of the National Tube Works and the Riverside Iron Works was about 350,000 tons.

In the consolidation of these plants, all purely finishing mills, there was no opportunity for "integration" with the economies incident to it. Plants necessarily separate and distinct from their nature, one corporate control and ownership could not coordinate them, as blast furnaces, converters and rolling mills are operated together, so that the molten metal by a continuous process passes from the blast furnace into the converter and thence to the rolls, without interruption or delay, till still hot it emerges a finished plate or rail or other finished product.

"This business," says Julian Kennedy, "is not necessarily very highly organized and with a small amount of capital. Small or large, each mill bought its raw material cold, usually billets, and converted them into tubes. A small mill could operate relatively as economically as a large one." These works were simply held together by a "community of ownership" under one corporate control.

During the boom season men had gone into the business hurriedly and some of the plants were suffering from the "diseases of infancy," a great many more were afflicted by the less curable and more serious maladies of old age.

Kennedy inspected these plants in 1898 or 1899; the Steel Corporation acquired them in 1901, and by 1907, 6 out of the 17 works above enumerated were abandoned, and according to the Commissioner of Corporations, "the reconstruction of the McKeesport works of the National Tube Co. involved an expenditure of several millions of dollars."

In answer to a request from the committee, the corporation has furnished it a list of its plants abandoned or dismantled. The following brief description of six of the plants which formed the National Tube Co. and were "shut down and dismantled"—demolished in from two to six years after they were acquired—is taken from that record:

Subsidiary company owning plant.	Location of plant.	Date originally built.	Date abandoned.	Product made.	Annual tonnage capacity at date of abandonment.
National Tube Co...	Allison works, Philadelphia, Pa.	1866	1907	Charcoal boiler tubes.	14,000
	American works, Middletown, Pa.	1880	1907	Wrought pipe...	114,000
	Chester works, Chester, Pa......	1877	1905	.....do..........	47,000
	Cohoes works, Cohoes, N. Y.....	1876	1907	.....do..........	14,700
	Oil City works, Oil City, Pa.....	1886	1903	.....do..........	68,900
	Youngstown works, Youngstown, Pa.	1886	1907	.....do..........	35,000

These plants were of all of an old type of construction, and in every instance the supply of steel required for their operation had to be shipped in to them. This condition of affairs resulted in high costs of manufacture at these plants. To have continued the plants in operation would have necessitated their being rebuilt at an early date and equipped with modern facilities. But even to have done this would not have resulted in much economy in cost of operation, because of the isolation of these plants from the source of steel supply and the disadvantage of their location for distribution of product. Accordingly, the company in 1903 decided to and commenced the construction of extensions to its plants at McKeesport, Pa., and Lorain, Ohio, and concentrated at these 2 plants the manufacture of the tonnage previously produced at the abandoned plants. Both McKeesport and Lorain produce steel from the ore up, and so are self-contained plants. The 6 old plants were not shut down and dismantled until facilities had been fully installed at McKeesport and Lorain to care for a tonnage equivalent to that produced at the old plants. The extensions to the McKeesport and Lorain plants added 460,000 gross tons annually to the company's output, considerably more than the tonnage of the abandoned plants.

We are not left in doubt as to the motive and the sole motive for the consolidation of these concerns; it is stated by its president, Mr. Converse, and spread upon the company's minutes.

> It is well known the tendency lately so conspicuous to establish a community of ownership or a unified control over great industries *as the only means of restraining destructive competition* led to the incorporation of various great companies.

Julian Kennedy, acting for J. P. Morgan & Co., having visited and carefully inspected these plants, and after taking into consideration the physical value of the plants as going concerns, and allowing an additional amount for the "diseases of infancy," "the valuation we made was a little higher (than a physical valuation) because anybody reproducing that plant would have to run it almost for a year in getting the organization perfected and the machinery adjusted, which is part of the construction cost, although not always considered that." After including everything of actual tangible value, "but nothing for good will or the possible effects of combination," he reported to Mr. Morgan that the actual value of these plants did not exceed $19,000,000, and that the owners were demoralized and disheartened; that it was a buyer's—a consumer's market.

Undismayed by this dismal prospect, J. P. Morgan & Co., with an amazing audacity, launched this new $19,000,000 monopoly on its course with a total capitalization of $80,000,000, and for their valued services in thus restraining the previously obnoxious and "destructive competition," received as compensation securities of this concern aggregating $20,000,000, or one million more than the total value of all the 17 tube plants, 1 in need of reconstruction and 6 "old style," "isolated," and "not equipped with modern facilities," or on the verge of being "shut down and dismantled."

To the uninitiated this would appear to be an utterly impossible task. Under the circumstances, the sudden and instant prosperity of the National Tube Co. is an object lesson of no little moment, illustrating the immense power of an absolute monopoly, no matter how inferior or defective or obsolete the plants, or how incapable the management and operation. With all the essential elements of failure, antiquated plants, badly located and burdened by this huge overcapitalization, nevertheless:

"The National Tube Co. was one of the most successful concerns of the United States Steel Corporation, and by the time it was acquired by the latter its common stock had a high market value *because of the company's earning power.* For the year ending June 30, 1900, the profits of this company, after deducting all expenses, exceeded $14,600,000, and after deduction for depreciation, bad debts, etc., the net earnings were $13,878,000." This, it will be seen, was at the rate of 35 per cent on the $40,000,000 of preferred stock outstanding and the rate of 17 per cent in the total capitalization of $80,000,000, or more than 73 per cent of the actual value of the entire property.

In order to illustrate the purposes, methods, and effect of such consolidations, we have described somewhat in detail the organization and operation of the National Tube Co. In discussing the other concerns forming the so-called "Morgan group," this is not necessary, owing to the fact that the same scheme for throwing together into one mass "of unrelated units," efficient and inefficient, new and obsolete plants under one control and into one heavily overcapitalized corporation, characterized all the operations of J. P. Morgan & Co. in the steel industry. The control established by the organization of the National Tube Co. as a practical monopoly, the prohibitive duty of $40 per ton imposed by the tariff, and the enormous profits of the National Tube Co., as exhibited by its earnings for the year 1900, clearly demonstrate its power to raise or lower the price to the consumer.

AMERICAN BRIDGE CO.

> The American Bridge Co., through banking connections, was affiliated with the Federal Steel and the National Tube Co., these three companies being spoken of as the Morgan companies. * * *
>
> The American Bridge Co. falls in the same general class with the American Tin Plate Co., the American Sheet Steel Co., American Steel & Wire Co. and the National Tube Co., *in that it was a consolidation of previously competing concerns.*
>
> The plants entering the combination were unrelated units dependent upon the larger steel manufacturers for the steel which constituted their raw material, and the *company was conspicuously undeveloped from the standpoint of integration of productive processes.* It was concerned with a specialty; that is, as the name indicates, the erection of bridges. It also engaged extensively in the erection of steel construction for buildings.
>
> Its annual capacity was about 600,000 tons. It did not have as high a degree of control as some of the other consolidations here discussed. (H. K. S. Rept., pt. 2, p. 93.)

The organizers of this company attempted to prevent such competition as might result from a lack of "complete control," by various devices and contracts in restraint of trade.

A certain Mr. Ladd seems to have secured some sort of control or option on the 27 companies which were to be consolidated in the American Bridge Co. From the minutes of this company (May 4, 1900) it is evident that one of the principal assets which he proposed to deliver to the new concern was an agreement entered into by all the former owners *not to compete with this new concern for a period of 20 years.*

This agreement provides that the vendors or their agent, the party of the first part, further agrees to procure and deliver to the bridge company proper agreements in writing and in form acceptable to the bridge company * * * to the effect that—

> Said party of the first part and said persons, respectively, *will not during the period of 20 years, directly or indirectly, without the consent in writing of the bridge company, engage or be interested in the business of bridge building, or manufacturing or selling structural iron or steel,* either individually or as copartners, in any firm or as agents for others, or as officers, directors, or stockholders of any corporation or association other than the bridge company or its successors, in any State, district, or Territory of the United States, or any of its possesssions, except the Territory of New Mexico. * * *

It was further provided that—

> "The $30,000,000 preferred stock issued shall represent the plant values as arrived at by audit and appraisal, and $10,000,000 cash working capital. Of the $30,000,000 common stock, one half, or $15,000,000, will go with the $30,000,000 of preferred *and the other half, or $15,000,000, will go to J. P. Morgan & Co., as commission,* and which they will use for the purpose of forming their syndicate for themselves and to indemnify me for my efforts." * * *

Upon the absorption of this company the United States Steel Corporation was subrogated to its rights under this contract.

As will be hereafter most apparent, the one thing most feared and dreaded by these various consolidations was competition by the Carnegie Co., actual or possible, and the Carnegie Co. was in the bridge business. "Destructive competition" might reasonably be apprehended at any time unless the "Ironmaster" was in some way satisfied, the following recital from the report of the board of directors of the Carnegie Co., April 23, 1900, explains the terms and conditions under which Carnegie was induced to keep out of the bridge business.

> Mr. L. C. PHIPPS. Most everyone present, I think, understands the proposition of selling the Keystone Bridge Works to the American Bridge Co. I think it would be well to incorporate in our minutes the proposition made by the promoter, Mr. Ladd, under date of April 2, 1900.

Simultaneously with the purchase of the Keystone plant an agreement was entered into by the contracting parties whereby the bridge company was to purchase 51 per cent of all materials required and "*to enjoy from the Carnegie Co. at terms or rates more advantageous than the terms or rates at which the Carnegie Co. would sell similar materials to any other customer.*"

The following colloquy between Mr. Lynch and Mr. Schwab, then president of the Carnegie Co., throws much additional light on the transaction.

> Mr. LYNCH. I rather favor the company retaining this department. If the matter has been carefully gone over by the other members of this board and the steel company board has approved of the sale and transfer, then I would vote for it.
>
> * * * * * * *
>
> Mr. SCHWAB. The proposition has been considered very carefully. *Mr. Carnegie approves* and also Mr. Henry Phipps. *It is our opinion that we are getting a very good price for Keystone* ($2,000,000 in preferred and $1,000,000 in common stock of the bridge company), and the contract which we are to make giving us 50 per cent of the steel to be purchased by the consolidated company will prove a very beneficial thing for us. If the bridge company does not take 75 per cent of the bridge works in the United States, we are then privileged to build a works of our own. If we continued in the bridge business we would most certainly have to rebuild the Keystone. (Min. board directors Carnegie Co. June 6, 1900, MacRae's Rept., p. 4101.)

It appears from the records of the United States Steel Corporation, which took over this plant a few months after this statement, that Mr. Schwab by no means overstated the case.

> All except the Walker plant were old and very much run down. *Especially was this the case with the largest one—the Keystone. It was of an old and obsolete type and production cost excessively high.*

This old concern was carried on the books of the Carnegie Co. at the time at a valuation of $50,000. (MacRae's Rept., p. 2618.)

The Keystone was not the only one of these bridge plants which "would most certainly have to be rebuilt" or dismantled; the sellers and purchasers seem to have agreed on the obsolete and worthless condition of 10 out of 27 of these plants.[1]

It then appears that 10 out of 27 of these "unrelated units" "conspicuously undeveloped from the standpoint of productive processes" were "old or obsolete," or their production cost was "excessive," or about to "fall down" and some seemed to combine several of these defects.

Had they been new and up to date, no legitimate advantage could possibly have accrued to J. P. Morgan & Co., and subsequently to

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[1] The following detailed and tabulated statement made by the United States Steel Corporation shows the condition of these plants immediately after they were acquired:

List of plants abandoned by subsidiary companies of United States Steel Corporation from Apr. 1, 1901 to July 1, 1911.

Subsidiary company owning plant.	Location of plant.	Date originally built.	Date abandoned.	Product made.	Annual tonnage capacity at date abandoned.
					Gross tons.
American Bridge Co.	Rochester plant, Rochester, N. Y.[1]	1872	Apr., 1903	Fabricated structural material.	6,400
	Keystone plant, Pittsburgh, Pa.[2]	1865	Feb., 1905	.....do...........	48,200
	Pittsburgh plant, Pittsburgh, Pa.[2]	1878	Dec., 1903	.....do...........	16,000
	Walker plant, Pittsburgh, Pa.[2]	1899	Apr., 1904	.....do...........	15,000
	Youngstown plant, Youngstown, Ohio.[3]	1889	May, 1904	.....do...........	12,900
	Buffalo plant, Buffalo, N. Y.[3]..	1893	Apr., 1904	.....do...........	6,400
	Columbus plant, Columbus, Ohio.[2]	1886	Feb., 1905	.....do...........	4,300
	La Fayette plant, La Fayette, Ind.[3]	1891	May, 1904	.....do...........	3,200
	Schultz plant, McKees Rocks, Pa.[4]	1856	Feb., 1903	.....do...........	9,600
	Milwaukee plant, Milwaukee, Wis.[4]	1875	Jan. 1910	.....do...........	10,700

[1] Very old and obsolete; buildings about ready to fall down. Could not operate profitably. The tonnage output of the above six plants abandoned because they were old, obsolete, and no longer profitable to operate, was transferred to and taken care of by the new, modern, and up-to-date plant constructed by the company at Elmira, N. Y. These six old plants served largely central and northern New York State and New England. Elmira was chosen as the point of concentration, as nearly all raw steel from Pittsburgh for above territory is shipped through Elmira. The new plant at Elmira has a capacity of 54,000 gross tons annually.

[2] These were all Pittsburgh district plants. All except the Walker plant were old and very much run down. Especially was this the case with the largest one, Keystone. It was of an obsolete type and production cost excessively high. Instead of rebuilding any or all of these plants it was concluded to concentrate the output at a single plant in the Pittsburgh district. Accordingly the Ambridge plant (near Pittsburgh) was constructed and all available equipment and facilities of the old plants removed to it. The Ambridge plant is modern in every particular and has an annual capacity of 200,000 gross tons of finished fabricated material.

[3] These were small highway-bridge plants; they were poorly arranged and their costs were high. An extension was built to the Canton (Ohio) plant and the tonnage capacity of the two plants was transferred to and taken care of at that point.

[4] These plants were totally destroyed by fire on Feb. 24, 1903, and Jan. 3, 1910, respectively. The Schultz plant was entirely and the Milwaukee plant largely on leased ground, and it was decided, therefore, not to rebuild. Moreover, the tonnage capacity of these plants was taken care of by the new plants at Ambridge and Gary, which were under construction at the time of the respective fires.

the Steel Corporation, by operating under a community of ownership, according to Julian Kennedy, in every way qualified to express a competent and disinterested opinion. Asked if it was necessary that a bridge plant be large or "integrated" in order to economically manufacture structural shapes, he replied:

> No; it is not necessary to be extremely large. A moderate sized plant does very well within its range of sizes. It can not build as large work as larger plants, of course. * * *

There is not much manufacturing in a bridge plant. There is not much chance for one works to operate cheaper than another. It is an assembling proposition, holes to punch and rivets to drive, and one plant can do this character of work about as cheaply as another.

> The CHAIRMAN. The only way in which the price of bridge and structural materials could be maintained would have been to take over these concerns whether they were dismantled or not?
>
> Mr. KENNEDY. I think so; yes. (Hearings, p. 5082.)

From the nature of the business no material advantage was gained by consolidation, and the dilapidated condition of the plants engaged in it rendered efficient or aggressive competition manifestly impossible, and therefore every effort and every sacrifice was made to restrain or placate competitors.

The agreement to give $3,000,000 par value in bonds for an old and admittedly obselete and dilapidated plant, to bind themselves to purchase 51 per cent of their raw material from the Carnegie Co., upon the condition that it would keep out of the bridge business, is conclusive proof of the excessive price at which the bridge company was forced to buy its peace of Mr. Carnegie, notwithstanding the fact that—

> The American Bridge Co., through banking connections, was affiliated with the Federal Steel and National Tube Co.
>
> Morgan & Co. were, by resolution of the board of directors of the bridge company, appointed its fiscal agents and bankers. (Mm. board directors American Bridge Co., May 11, 1900, MacRae's Rept., p. 4173.)

Not one pound of steel would the bridge company have purchased from Carnegie which could have been secured from the Federal Steel. Transactions between those members of the same "group" were in the nature of "intercompany profits."

J. P. Morgan himself was a director in the Federal Steel Co. Robert Bacon and Charles Steele, of the firm of Morgan & Co., were directors in both companies.

> The similarity between the Federal Steel Co. and the Carnegie Co. extended to the character of their output, the principal products of the Federal concern being steel rails, billets, plates, structural shapes, and other heavy lines, and, like its Pittsburgh rival, many of its best customers were themselves steel manufacturers. (H. K. S. Rep., pt. 2, p. 88.)

And

> The Federal Steel Co. owned the Illinois Steel Co., which made structurals, Z's, channels, angles, blooms, billets, ingots, bars, and pretty nearly everything along that line. (Hearings, pt. 1, p. 41.)

Nevertheless, these "unrelated units," dependent upon the larger steel manufacturers for the steel which constituted their raw material, bound themselves to purchase the greater part of that material from the most dreaded rival of the Federal Co. (see Hearings, p. 220), although that company made ready for assembling iron and steel in every conceivable form which any bridge company could require. Judge Gary admits the Federal Steel was deficient in not having sufficient finishing mills to make it a perfectly good proposition. (Hearings, p. 204.) Finishing mills were their most coveted customers and, having alliances through stock ownership or otherwise with tube and wire mills, consumers of structural shapes were the most coveted of all. This company had not the monopoly possessed by the tube company; its plants were equally as antiquated and as badly located, and it was weighed and trammeled by the inexorable demands of the powerful Carnegie Co.

This property, as we have seen, was promoted by one Gifford Ladd, and as stated by the Commissioner of Corporations—

> Of the $14,500,000 total cash capital provided approximately $12,690,000 was expended for plants and working capital, this amount including the $5,500 paid the promoter. This left net cash balance on hand of $1,832,000.

For services rendered in assembling these plants, which were bought outright for $12,670,000, together with a covenant by the vendors not to engage in the bridge or structural steel business anywhere in the United States, outside of New Mexico, J. P. Morgan & Co. and other promoters received securities of the reorganized company of the par value of $15,000,000 or $2,130,000 more than the actual value of all the plants, *good will included.*

J. P. Morgan & Co. were not the only financiers who at this time reaped a rich harvest from the consolidation of hitherto distinct or unrelated units in the steel industry.

> From a financial point of view there were four groups—"Morgan," "Moore," "Carnegie," and "Rockefeller." (Com. Rept., pt. 2, p. 10.)

The National Steel, American Sheet Steel, American Tin Plate, and American Steel Hoop Cos. were all "Moore" concerns. (Com. Rept., p. 10, pt. 2.)

THE NATIONAL STEEL CO.

The National Steel Co. produced semifinished products, and owing to its close relations to the steel hoop, sheet steel, and tin-plate companies, all "Moore concerns" organized by the same syndicate, it found in these finishing mills a ready market for its product and in this respect had a decided advantage over the Federal Steel Co.

The total cash value of the property and cash assets acquired by the company at its organization over and above its underlying bonds did not exceed the $26,000,000 preferred stock issued.

In addition to the preferred this company issued $32,000,000 of common stock, all of which was admittedly pure water, $5,000,000 of which went to promoters, the balance was given as a bonus to the purchasers of preferred stock.

This company subsequently acquired certain ore, steamships, and other properties. The Commissioner of Corporations estimates the total value of its tangible property on April 1, 1901, at $39,898,000.

AMERICAN STEEL HOOP CO.

The organization of the (American Steel Hoop) company was conducted by W. H. Moore in connection with New York bankers. C. S. Guthrie, then president of the company, in testimony before the industrial commission in October, 1899, said that the organization of the American Steel Hoop Co., the American Tin Plate Co., and the National Steel Co. was "substantially the same in every respect." This means that the promoters determined upon a cash valuation of the plants and then gave the purchasers the option of cash or taking preferred stock, up to the amount of such cash valuation of the property, with an equal amount of common stock thrown in as a bonus.

All of the common stock of the company at its organization was nothing but "water—the capitalization of future hopes." "It will be noted that the issue of the common stock exceeded that of the preferred by $5,000,000. This went to the promoters for 'organization expenses.'" (Rept. Com., pt. 2, p. 139.)

> It was primarily a combination *of previously competing concerns, and a desire to limit competition and afford a large profit to promoters* was undoubtedly the ruling motive in its organization. (H. K. S. Rept., pt. 1, p. 1.)

This company was a consolidation of nine concerns, etc. The commissioner of corporations places a value of $11,000,000 on these nine plants, but with the qualification that this estimate is probably too liberal (p. 185).

The excessive overcapitalization of this and like concerns in the "Moore group" was thoroughly understood by the Steel Corporation. At a meeting of the board of directors of the Carnegie Steel Co. Judge

Reed, president of one of these "Moore companies" and closely identified with the organization of all of them, made the following important observation in reply to a proposal to consolidate the Steel Hoop with other companies:

> Then the question came up as to the propriety of making a consolidation instead of a lease, but that involved the same difficulty, because any stockholder who was not satisfied with the consolidation *could demand an appraisement; and an appraisement at any time of these properties to decide what the stock is worth would be embarrassing to say the least.* (McRae Rept., p. 4056.)

When this company could not buy a competing plant bodily, it paid it to stay out of the business.

Hoop steel, *especially cotton ties*, was its *specialty* (Com. Rept., pt. 2, p. 3), and being unable to take over the costly Illinois Steel Co., it paid it $150,000 annually to keep out of the cotton-tie business. (McRae's Rept., p. 4056.)

The consolidation of the nine constituent concerns forming the American Steel Hoop Co. at approximately 300 per cent of their actual value was simply the capitalization of the power to fix the price of steel hoops and cotton ties, which the promoters sought to attain by this merger.

AMERICAN SHEET STEEL CO.

The American Sheet Steel Co. was a combination of 164 sheet mills and a few open-hearth and puddling furnaces. The Commissioner of Corporation values an ordinary sheet mill at $40,000, or $6,500,000 for the mills. "The additional plants of the company could not have been worth more than a few million dollars," in the opinion of the Commissioner of Corporations. (H. K. S. Rept., pt. 2, p. 141.) He says:

> This company was virtually a counterpart of the American Tin Plate Co., in that it was organized to consolidate previously competing concerns and in that it was engaged in the manufacture of practically a single product—sheets. Its annual capacity was in the neighborhood of 500,000 tons, this representing about 70 per cent of the country's total capacity at the time of its organization. The element of integration was hardly present in its case. (Rept. Com. of Corp., pt. 1, p. 91.)

These 164 "unrelated units," valued at $6,500,000, with other properties of comparatively small value—"a few millions"—were consolidated and capitalized at $52,000,000. Forty-nine million dollars of the stock was actually issued.

This company is in every respect a "counterpart" of the American Tin Plate Co., and any analysis of the motives or methods of the promoters of the latter concern will apply with equal force to the Sheet Steel Co.

AMERICAN TIN PLATE CO.

Tin-plate mills are absolutely "unrelated units"; there is no possible economy in either the physical or corporate consolidation of these concerns. The cost of producing tin plate remains the same whether the mills are owned or operated separately or collectively.

Julian Kennedy, speaking from actual experience, demonstrates the impossibility of cheapening the cost of producing tin plate by merger of the plants.

> The CHAIRMAN. Is there any company—can a man, for instance, operate 10 or 12 mills—the rolls—used in the manufacture of tin plate approximately as cheaply as he could a thousand?
>
> Mr. KENNEDY. Yes; there is not much difference. * * * In making tin plate you roll that plate on a mill, and if you want to make twice as much tin plate you put another mill on the side, and if you want to make 10 times as much you put on 10 mills. You keep on adding, like looms in a woolen mill. In other words, before you get to the bar there is a long sequence of operations—melting the ore, converting in open-hearth furnaces, casting it into ingots—and there is a big investment in mines, which is considered essential to start in with. * * * But with a tin mill a man can start in with 6 hot mills and make his product as cheaply as if he had 60, proportionately. * * * Ordinarily sheet iron would come under the same conditions; bridge work would be similar. (Hearings, pp. 5127–5128.)

Notwithstanding the fact that no legitimate advantage or conceivable economy could possibly accrue from the consolidation of these plants, the American Tin Plate Co., in the latter part of 1898, "acquired practically every tin-plate concern in the country, giving it an almost complete monopoly of that branch of the industry." (H. K. S., Rept., pt. 2, p. 3.)

> The American Tin Plate Co. typifies that class of consolidations which were distinctly lacking from the standpoint of integration of productive processes and which were primarily designed to control or eliminate competition in the sale of products. (H. K. S. Rept., pt. 2, p. 90.)

The promoters of this concern fail to assign any other reason for its organization than the deliberate purpose to create and secure a monopoly in the manufacture of tin plate.

Judge Reid, president of the company, and now a director in the United States Steel Corporation, when testifying before the Industrial Commission, frankly admits the intention of the promoters to control prices by the merger of these mills.

> Q. What led to the organization of the American Tin Plate Co.?—A. Well, the competition between the old companies had become so strong the business was fast drifting into a condition where there was little, if any, profit. (Rept. Indust. Com., vol. 1, p. 866.)

William Griffith, a manufacturer of tin plate, states:

> Well, they (the Tin Plate Co.) have accomplished their purpose so far as the advance of prices is concerned. There is no question but that the American Tin Plate Trust as long as they govern conditions will place prices to the full limit. (Report Ind. Com., vol. 1, p. 903.)

The 39 plants, embracing 279 mills, were not long in demonstrating their power to "place prices to the full limit." The heavy tariff duties imposed by the McKinley bill relieved the tin-plate industry from all dread of any competition from abroad, and the consolidation made it the absolute master of the home market.

In order to retain the rich monopoly already acquired, "The policy of eliminating competition was still further manifested by negotiations undertaken by the company almost immediately after its formation to control the supply of tin-plate machinery with a view of preventing the construction of independent tin-plate mills." (H. K. S. Rept., pt. 2, p. 90.)

William Griffith, for 11 years a manufacturer of tin plate, and operator of one of the mills absorbed by the American Tin Plate Co., estimates the value of the constituent plants of this company as follows:

> Q. What was the value of the plants taking them individually?—A. I presume they could be built for $12,000,000. They can not be built for that to-day.
>
> Q. Twelve million dollars, good will and all?—A. Yes. (Ind. Com. Rept., vol. 1, p. 911.)

Says Judge Reid:

> Presumably there were cases where preferred and common stock would represent, we will say, *four times the cash value of the plant itself* under ordinary conditions. (Ind. Com. Rept., vol. 1, p. 884.)

The syndicate purchased these mills from their owners for cash if the vendor so desired, or he could at his option take preferred stock *at par* and with each $100 of preferred stock he was given *as a bonus* a corresponding amount of common stock.

The promoters frankly admit that the common stock represented *nothing but water*, and three-fifths of all its stock was common. The promoters of this concern received $10,000,000 in stock for the consolidation of 39 plants, valued at $12,000,000.

The profits incident to an absolute monopoly enabled this concern to declare substantial dividends on its huge capitalization of $50,000,000. Its earnings in 1900 exceeded $5,750,000, and the accumulated surplus on March 21, 1901, was $6,177,537, or more than 50 per cent of the actual value of the entire property.

It is manifest from the records of the Steel Corporation that these sheet-steel and tin-plate companies were absorbed at an increased capitalization for the purpose of securing and perpetuating the monopoly they had hitherto obtained. The statement of Judge Reid to the directors of the Carnegie Co., July 1, 1901, "that an appraisement at any time of all these properties to decide what the stock was worth would be embarrassing to say the least" shows the vivid appreciation of the directors of the Steel Corporation of the comparative worthlessness of many of these tin mills and the purpose of their acquisition. In the auditors' minutes of the Steel Corporation "it was stated *that often the principal consideration* about the purchase and later abandonment of a certain plant was the fact that by getting the plant *we were enabled to eliminate its competition.*" (MacRae Rept., p. 3925.)

That the elimination of competition was the *principal consideration* in the absorption of the Sheet Steel & Tin Plate Co.'s is made still more evident, if further proof were required, by the subsequent history of these plants as detailed by the corporation's own records.

In 1901 the United States Steel Corporation acquired 164 sheet mills and 39 tin-plate plants, capitalized at the time of their absorption at $93,316,500, and within six years it had made junk of 13 of the 39 tin-plate plants, and sheet mills with a total annual capacity of 65,100 tons. (MacRae Rept., pp. 4362–4363.)

The Steel Corporation commenced the wholesale demolition of these mills in less than 90 days after they were acquired. The complete lists of derelicts acquired is as follows:

Subsidiary company owning plant.	Location of plant.	Date originally built.	Date abandoned.	Product made.	Annual tonnage capacity at date abandoned.
American Sheet & Tin Plate Co.	Apollo works, Apollo, Pa.[1]	1850, 1885	June, 1902	Sheets	16,000
	Dennison works, Dennison, Ohio.[2]	1897	May, 1902	do	10,000
	Falcon works, Niles, Ohio[2]	1867	May, 1902	do	10,000
	Chartiers works, Carnegie, Pa.[3]	1884	June, 1901	do	6,500
	Canton works, Canton, Ohio[4]	1894	May, 1910	do	12,600
	Canonsburg works, Canonsburg, Pa.[5]	1882	June, 1902	Tin plate	10,000
	Atlanta works, Atlanta, Ind.[5]	1894	July, 1901	do	12,000
	Beaver works, Lisbon, Ohio[5]	1894	Aug., 1902	do	12,000
	Irondale works, Middletown, Ind.[5]	1893	Sept., 1903	do	10,000
	Cumberland works, Cumberland, Md.[5]	1893	July, 1901	do	8,000
	Banfield works, Irondale, Ohio.[5]	1868	Jan., 1902	Terne plate	8,000
	Reeves works, Canal Dover, Ohio.[5]	1895	June, 1901	Tin plate	12,000
	Champion works, Muskegon, Mich.[5]	1899	July, 1902	do	12,000
	Ellwood works, Ellwood City, Ind.[5]	1892	May, 1902	do	12,000
	Great Western works, Joliet, Ill.[5]	1892	July, 1901	do	7,000
	Anderson works, Anderson, Ind.[6]	1894	May, 1905	do	12,000
	Falcon works, Niles, Ohio[7]	1892	June, 1907	do	12,000
	Star works, Pittsburgh, Pa.[8]	1895	Dec., 1906	do	21,000

---

[1] This was an old and obsolete type of plant. It was owned by the same interests which in 1896 had constructed a new plant at Vandergrift, it being the intention of such interests to abandon this old Apollo plant when Vandergrift was completed. In fact, Apollo had already been partly dismantled when the American Sheet Steel Co. acquired it in 1900. The final dismantlement in 1902 was only the carrying out of above policy.

[2] The machinery in both these plants was light, old, and insufficient to permit the mills to be operated economically. The units were very small and the expense of rehabilitation would have been out of proportion to any advantage which would have accrued to the company therefrom. Accordingly, the plants were dismantled and equipment transferred to other plants of the company whose capacities were increased.

[3] This was a specialty mill of insufficient size to be a profitable operating proposition; the machinery was old and inefficient. Plant was dismantled and capacity transferred to Wellsville plant, which was enlarged to take care of same.

[4] This plant was operated until May, 1910, when it was seriously wrecked by a boiler explosion, demolishing the entire boiler and power plant, a large amount of the machinery, and seriously damaging the buildings. As the plant was a small one and costs high, it was not deemed advisable to rebuild, as the expenditure required would have been out of proportion to the returns that could be expected.

[5] These 10 plants were all small ones, poorly designed and constructed, and in many cases were badly run down and in poor physical condition. The operating costs were, because of these conditions, exceedingly high, and in some of the cases prohibitive. The fixed expense for maintenance of an organization at each of these plants of such small tonnage output handicapped them greatly so far as concerned economical operation. The company, therefore, as rapidly as it could add equivalent capacity to its other and larger and modern plants located in the same territory, dismantled and abandoned these plants. None of the plants was abandoned until at least an equivalent tonnage of output had been added to some of the company's other plants.

[6] The same reason as noted above for the preceding 10 plants apply to this plant also, although in addition the location with regard to fuel supply became very bad, as with the playing out of the natural-gas supply this plant was virtually forced to close because of prohibitive fuel cost.

[7] The design and equipment of this plant was poor, thus forcing it to run at a high cost. In 1907 it became apparent that the plant would have to be rebuilt if operations were to continue. It was thought to be the better plan to consolidate the operations of this plant with those at the Chester (W. Va.) plant, rather than maintain this plant with its small tonnage output. Accordingly, this was done.

[8] This was an old plant and its costs were high. It was located on highly valuable property, situated right in the heart of the city of Pittsburgh; the plant was badly congested and no room for expansion was available. In 1906 the company was confronted with the problem of rebuilding, as costs were becoming prohibitive, or shutting down the plant. For the reason above noted, namely, the lack of room on which to build a modern plant and the great value of the real estate (too valuable to use for manufacturing purposes), it was concluded to abandon the plant and transfer the equipment and tonnage output to other mills in the same district, which was done.

FEDERAL STEEL CO.

The Federal Steel Co., the largest of the so-called "Morgan group," may well be regarded as the giant concern of J. P. Morgan & Co. prior to the formation of the United States Steel Corporation. J. Pierpont Morgan and Robert Bacon, of J. P. Morgan & Co.; H. H. Rogers, of the Standard Oil Co., and Norman B. Ream, Samuel Mather, and Nathaniel Thayer, all afterwards directors in the Steel Corporation, served first in that capacity in the Federal Steel Co., and E. H. Gary was its president. This was before the advent of its greater successor, the United States Steel Corporation, mentioned in common parlance as "the Steel Trust."

In testifying before this committee, Judge Gary speaks with evident satisfaction of the early history of this holding company.

> Judge Gary. I would like to say that the United States Steel Corporation was fashioned after the Federal Steel. The organizations were very much alike. * * * I think the organization of the United States Steel Corporation is substantially like the organization of the Federal Steel Co. (Hearings, p. 67.)

Before the Industrial Commission, October 19, 1899, Judge Gary gave a detailed, interesting, but somewhat misleading account of the "modus operandi" of the Morgan Syndicate in the organization of this company out of a number of operating, transportation, and ore properties, and since the evolution of the Federal Steel Co. and the Steel Corporation were practically repetitions of the same operations, it is of interest here.

> The Federal Steel Co. made an arrangement with J. P. Morgan & Co. whereby J. P. Morgan & Co. agreed on their part to deliver to the Federal Steel Co. the stock or a majority of the capital stock of these different companies on a certain basis, and the Federal Steel Co. on its part agreed when the stock was delivered to give in exchange for it the stock of the Federal Steel Co. * * *
>
> Mr. Stetson was the counsel of J. P. Morgan & Co., and they were the managers of a syndicate so called. * * * The Federal Steel Co. had an authorized capital stock of $200,000,000—$100,000,000 preferred and $100,000,000 common. The amount of capital stock actually issued is about $53,000,000 of preferred stock and about $46,000,000 of common stock, making about $99,000,000 issued, a little more than that, but not quite $100,000,000. The actual book value of the plants and properties, not including the cash of these constituent companies, was about $45,000,000; the cash on hand which these companies had was about $10,000,000, making $55,000,000. There was an increase in value of these properties, being largely in lands, amounting to about $30,000,000. * * *
>
> Now, the Federal Steel Co. said to J. P. Morgan & Co.: If you will give us the stock of these companies and with it $14,075,000 in money, making $100,000,000 in all, we will give you $100,000,000 of the capital stock of the Federal Steel Co.—$53,000,000 in preferred and $46,000,000 in common. * * *

> In making this exchange and doing this business, J. P. Morgan & Co. made a profit of about $200,000; I will not be exact; they paid all the expenses, including about $40,000 for incorporation fees to the State of New Jersey.

Judge Gary is absolutely correct in that he was not "exact" in stating the compensation of J. P. Morgan & Co. If the stock of this concern was worth par, as he seems to suggest, then he missed exact accuracy by about $9,000,000.

> The underwriting syndicate of the Federal Steel Co. received approximately $5,680,000 preferred stock and $8,400,000 common stock in return for approximately $4,800,000 cash and their services in organizing that concern. (H. R. S. Rept., pt. 1. p. 7.)

And, adds the Commissioner of Corporations—

> This liberal compensation to the underwriting syndicate is very fairly to be considered as sustaining other evidence of extensive overissue of stocks of the Federal Steel Co.

Every detail of this transaction was spread upon the minutes of the Federal Steel Co. on October 9 and 11, 1898, Judge Gary having been elected president of the company at the latter meeting. (See minutes board of directors, Federal Steel Co., Hearings, pp. 4194, 4195, 4196, 4198, and 4199.)

Judge Gary, when before this committee, in answer to an inquiry as to the character, extent, and capitalization of the various subsidiaries of the Federal Steel Co., stated:

> The Illinois Steel Co. was a manufacturing company. It had plants at South Chicago, West Chicago, North Chicago, and at Joliet, Ill., and Milwaukee or Bay View, Wis. It was the owner of the Chicago, Lake Erie & Eastern Railroad, running from its plant at South Chicago to a point in Indiana, and also had trackage rights over the Chicago & Eastern Illinois into the coal fields of Illinois at Danville and also over the Elgin, Joliet & Eastern Railroad from Chicago to Joliet and various other terminal railroads, mostly terminal railroads, connected with the different plants. It was the owner of the Southwest Connellsville Coke Co. at Mount Pleasant, Pa., which manufactured coke. It was also the owner of the Eureka Coal Co., which manufactured coke in Pennsylvania. It was the owner of some other coal land in Illinois and other places and various quarries of stone. It was a small owner of iron ore in Michigan and the owner of considerable iron ore of an inferior grade in Wisconsin near Milwaukee. Its capital stock was $18,650,000, and $9,822,000 bonds or indentures had been issued by the company. (Hearings, pt. 2, pp. 67–68.)
>
> The Illinois Steel Co., which was organized in 1889, was itself a consolidation of three concerns—the North Chicago Rolling Mill Co. (with plants at North Chicago, South Chicago, and Milwaukee), the Union Steel Co., and certain property of the Joliet Steel Co. * * *

> The valuation placed upon the plants by the officers of the three constituent concerns at the organization of that company, for purposes of consolidation, was $12,750,000. * * * In view of the usual tendency to inflate valuations in such mergers, it seems altogether probable that these plant valuations were liberal.
>
> That the company was liberally capitalized, moreover, is indicated by the earnings, which from the date of its organization in May, 1889, to December 31, 1899, averaged only 3.8 per cent on the capital stock. (H. K. S. Rept., pp. 120 and 121.)

The stock of this concern ranged from 82½ in 1895 to 29½ in 1897, and averaged about 56 between 1895 and 1898, indicating an actual value of less than $10,000,000.

> The Minnesota Iron Co. was [says Judge Gary] the owner of a very large body of iron ore, located principally on the Mesabi and Vermilion ranges, respectively, in Minnesota. It owned the capital stock of the Duluth & Iron Range Railroad. * * * It was also the owner of the stock of the Minnesota Steamship Co.; the owner of a large number of boats on the Lakes. Its capital stock was $16,500,000. It has issued no bonds. The Duluth & Iron Range Railroad had issued bonds to the extent of $7,731,000. (Hearings, p. 68.)

A statement filed with the New York Stock Exchange December 4, 1898, and incorporating a condensed balance sheet, estimated the entire assets of this company at $22,365,766.81. (Hearings, pp. 4202–4204.)

The stock of this company ranged from $38 in 1897 to $91 in 1890; it averaged less than $65; $70 is an excessive estimate. This would indicate an actual value of something less than $12,000,000. (H. K. S. Rept., p. 123, note.)

> The Lorain Steel Co. was a manufacturing corporation, manufacturing at Lorain, Ohio, pig iron, blooms, billets, and girder rails, and at Johnstown, Pa., railway supplies. Its capital stock was $6,000,000 of common and $3,000,000 of preferred, and it had issued bonds amounting to $1,400,000. (Gary, hearings, p. 68.)

The minutes of the Federal Steel Co. show that this company was acquired November 9, 1898, by exchanging 13,222 shares of preferred stock and 10,548 shares of common stock of the Federal Steel Co. in exchange for the stock of the Lorain Co. and the payment of $264,454.70 in cash, or $2,641,454.70, estimating both the preferred and common stock of the Federal Co. at par. (Hearings, p. 4207.)

Concluding Judge Gary's detailed description of the properties of the Federal Steel Co.:

> The Elgin, Joliet & Eastern Railroad is what is known as the outer belt line. * * * It was a line engaged in general transfer business, having connections with all railroads entering Chicago, and also served a large and growing business along its line.

> * * * Its capital stock was $6,000,000, and it has issued bonds amounting to about $7,500,000.
>
> I have fully answered your question, except that I did not give the products manufactured by the Illinois Steel Co. It manufactures pig iron, ingots, blooms, billets, plate, and rails, some rods, and some merchant steel. Those are the principal products. (Hearings, p. 68.)
>
> The average earnings for the three years ended June 30, 1898, after deducting all fixed charges, were equivalent to only about 1.3 per cent annually on the $6,000,000 of capital stock. The company at the time of the transfer had outstanding about $7,417,000 of bonds. This large indebtedness taken in connection with the moderate earnings above shown (even allowing for the fact that they were for years of depression) leaves little doubt that $70 per share for the stock *is not only liberal but probably excessive.* On this basis its value would be $4,200,000, whereas for this stock, plus $1,050,000 in cash, the Federal Steel Co. issued $9,450,000 of its securities. (H. K. S. Rep. 124.)

It is established in the main by its own records and when in a few cases they are not available, by the most liberal estimate possible, measured by the market value of its stocks that the properties of this company, including all its subsidiaries, did not exceed $32,741,454.70, viz:

Illinois Steel Co	$12, 750, 000. 00
Minnesota Iron Co	12, 000, 000. 00
Lorain Steel Co	2, 641, 454. 70
Elgin, Joliet & Eastern	5, 250, 000. 00
Total	32, 741, 454. 70

It seems almost incredible that upon this slender base of less than $33,000,000 of actual tangible values Rogers, Ream, Bacon, and others, guided and sustained by the powerful house of J. P. Morgan & Co., could have erected this mountain of securities, $200,000,000—$100,000,000 preferred and $100,000,000 common stock—$100,000,000 of which was actually issued, and for services rendered J. P. Morgan & Co. received as commissions a block of stock equal at par to approximately 29 per cent of the actual value of the whole concern.

Judge Gary in discussing the capitalization of this company says:

> Mr. YOUNG. What was the joint capitalization of all those companies previous to the organization?
>
> Mr. GARY. That I do not know; I do not remember. I do not know whether they were considered. I am inclined to think they were not. We tried to get at the value of the properties themselves.
>
> Mr. YOUNG. Do you know whether the $90,000,000 was considered more than the joint capitalization of all those companies?
>
> Mr. GARY. I would not deny it was. It would be remarkable if it were not, for I am sure the properties were worth more than their capitalization at that time. I should think it was, but I do not remember.

> Mr. YOUNG. Had the Illinois Steel Co. been a very profitable concern up to that time?
>
> Mr. GARY. No; it had not.
>
> Mr. YOUNG. How about the railroad?
>
> Mr. GARY. It had not.
>
> Mr. YOUNG. And the Lorain Steel Co.—you say was just building?
>
> Mr. GARY. Yes; it was not a completed plant. They were making some iron and some steel. I do not think any of the companies had been very profitable. I know, for instance, the Duluth & Iron Range Railroad did not pay any dividends whatever from the time of its organization—I think about 1884 to 1899.
>
> Mr. YOUNG. What was the strength, then, of this organization? * * *
>
> Mr. GARY. It was the fact that it put together, as a going concern, a self-contained proposition, a rounded-out proposition, from the raw material to the finished product. That was its strength. (Hearings, pp. 203 and 204.)
>
> None of these companies, so far as I know or remember, was in any respect in competition one with the other; *but it gave to the Federal Steel*, which was organized to take over these different properties by the exchange of stock, the iron ore, the Duluth & Iron Range Railroad to convey the ore to the lake, a large number of boats on the lake, the manufacturing concerns at South Works, Chicago, the North Works at Joliet, the Lorain Steel Co., and a large tract of coal in the Pennsylvania district, particularly. * * *
>
> It was a *rounded-out proposition*, a splendid proposition, except it did not have sufficient finishing mills. It was defective in that respect. (Hearings, pp. 202 and 203.)

Mr. Young here inquires specifically as to the organization and operation of every subsidiary of the Federal Steel Co., and Judge Gary reluctantly admits that they were overcapitalized and unproductive.

"What was the strength, then, of this organization?" was an instinctive, an inevitable inquiry.

Judge Gary replies with emphasis:

> *It was in the fact that it put together, as a going concern, as a self-contained proposition, a rounded-out proposition, from the raw material to the finished product.*

That was its strength. Judge Gary fully elaborates how the various subsidiaries—ore, transportation, and manufacturing companies—were "put together and rounded out" in such a way as to make it a splendid proposition.

And we admit the force of Judge Gary's answer, and do not question the industrial advantage incident to such a common ownership. Since Judge Gary explicitly avers "None of these companies, so far as I know or remember, *was in any respect* in competition one with the other," we do not mean even inferentially to approve of the ownership or operation of the Duluth & Iron Range or Elgin, Joliet & Eastern Railroads; industrials should under no circumstances operate common carriers. This matter is discussed at length later in this report.

The economies resulting from the consolidation of naturally coordinated and absolutely noncompetitive plants and processes by which iron ore is converted into finished steel are self-evident.

A blast furnace having no ore must purchase it, paying a profit to the seller, but there is no competition between the ore miner and the operator of the furnace, and necessarily no competition is destroyed by the miner's erecting a blast furnace or by the ownership of ore by the operator of the furnace.

When the ore is smelted the molten iron is run into sand molds and sold as "pig iron," or while still in its molten state is conveyed directly to the converter or "open-hearth furnace." There is a difference of about $1 a ton between the cost of making steel from cold pig iron and the molten metal.

The nature of the business in a way necessitates the consolidation of steel and blast furnaces under a common ownership; the profits incident to such a transaction are independent of and in no way dependent upon limitation of output or increase of price.

The steel in turn is either run into ingot molds, and these ingots—large masses, still white-hot—are rolled into blooms and slabs, plates and bars, and these in turn without interruption or delay are often, by a continuous process, converted into such finished products as rails, beams, channels, angles, T's, cotton ties, wire, nails, etc., at a decided advantage over the manufacturer of like commodities who is dependent upon the cold steel in the form of small billets.

The consolidation and coordination of ore properties, blast and steel furnaces, and rolling mills was clearly illustrated in the formation of the Federal Steel Co. It was ideally "integrated," or to use Judge Gary's concise and comprehensive description, "It put together as a going concern a self-contained proposition—a rounded-out proposition from the raw material to the finished product * * *." It gave to the Federal Steel Co., which was organized to take over these different properties, iron ore, "the Duluth & Iron Range Railroad, to convey the ore to the lake, a large number of boats on the lake, the manufacturing concern at South Works, Chicago, the North Works at Joliet, the Lorain Steel Co., and a large tract of coal in the Pennsylvania district, particularly."

Subsequently, such was the faith of the United States Steel Corporation in this apparently paradoxical proposition, that these large concerns, which had been failures when operating separately and independently, were nevertheless a "splendid proposition" if put together as a going concern under a single ownership and control, that they selected the site of the Federal Steel Co.'s works for the most extensive of their future operations and on it erected the most elaborate, modern, and costly steel and rail mills in the world; builded about them a great city, and gave to all the name of Gary, as a monument to the business sagacity of the man who first saw in Chicago rather than in Pittsburgh the strategical point for the future development of the steel industry in America.

It would not be difficult to account for the future prosperity and immense profits of the Federal Steel Co. upon some other assumption than that they were the fruits of monopoly. Unlike the National Tube Co., their plants were distinctly not "unrelated units" "conspicuously undeveloped from the standpoint of integration of productive processes."

Their sole and exceptional "*strength*" was due to the fact that though in no respect "in competition one with the other," these plants had attained in the highest degree the integration of productive processes. The cream of the finest "Old Range ores, transported in their own cars and boats; the iron fabricated by new and improved mills, and these mills owning the Elgin, Joliet & Eastern Railroad—a belt line circling the city of Chicago, and having connections with all the railroads entering the city," afforded an ideal facility for the transportation of their finished products. The purpose and "plan" as announced in its first annual report was—

> to own and control adequate facilities for transportation both on land and water; to manufacture and deliver finished steel; and to transact all business in connection with the same with the *greatest economy.*

This company, as described by Judge Gary, was the physical embodiment of Mr. Schwab's apocryphal description of the United States Steel Corporation before the Chicago bankers, December 21, 1901, a consolidation which—

> instead of restricting trade expands trade by creating new avenues and reducing the price of the commodities which it produces. * * * The chief advantage of consolidation is the reduction of the cost of the articles produced.

And it is not contended that the Federal Steel Co. while overcapitalized had a monopoly in semifinished products, which formed the bulk of its output. It was the *one company* so far considered which, to quote Mr. Schwab—

> was not a trust * * * founded on misconceptions and promoted along lines of self-destruction; its fundamental principles, the restriction of trade, the increase of price, and the throttling of competition—a trinity that would wreck any proposition—business, political, or social.

The Commissioner of Corporations finds that—

> Although a combination, the chief object of its formation apparently was not so much to eliminate competition as to secure an organization which should to a large extent be independently situated with respect to ore, fuel, etc. (Com. Rept., p. 88.)

It had a strong, formidable rival, whose competition it could not escape, and whose presence was, by Judge Gary's own admission, the occasion of continual apprehension. (See hearings, p. 220.)

> The similarity between the Federal Steel Co. and the Carnegie Co. extended to the character of their output, the principal products of the Federal concern being steel rails, billets, plates, structural shapes, and other heavy lines; and, like its Pittsburgh rival, many of its best customers were themselves steel manufacturers. (Com. Rept., p. 88.)

Here was the essence of competition. The same commodities offered for sale by rival concerns to the same consumers. Neither had anything like a monopoly of the business. The Federal Co.'s annual ingot capacity was about 15 per cent the country's total at the date of its organization (Com. Rept., p. 88), the Carnegie about 18 per cent (see p. 87, H. K. S. Rept.).

So long as this competition existed this company was absolutely powerless, with all its vaunted advantages of organization and integration, to control prices or to earn the inordinate profits of the American Steel & Wire Co. and the National Tube Co., both of which, as are here shown, were conspicuously lacking in these advantages. There was no sudden jump in the price of semifinished products incident to its organization, it accumulated no surplus of millions, and did not recapitalize on account of increased earning capacity or "combination value." The only subsidiary to declare a fat dividend was the Duluth & Iron Range Railroad, and this railroad—

> which had a substantial monopoly of the ore business in a limited section of the Lake region, and which earned large profits, an average of nearly 20 per cent on the $3,000,000 capital stock from 1894 to 1898. (Com. Rept., pt. 2, p. 123.)
>
> The earnings of the constituent companies (of the Federal Steel Co.) for the nine months ending June 30, 1898, after deducting interest on bonds, were officially estimated in a listing application to the New York Stock Exchange at not less than $3,000,000 and those for the full year 1898 at a minimum of $4,000,000. This sum, it will be seen, is equivalent to less than 8 per cent on the $53,260,000 of the preferred stock issued. (Com. Rept., pt. 2, p. 126.)

The following statement of the capitalization and earnings of the Federal Steel Co., American Steel & Wire Co., and the National Tube Co. for the year 1899 is interesting and instructive:

Company.	Issued securities, Dec. 31, 1899.[1]	Earnings 1899 before deducting bond interest.[2]	Per cent.
Federal Steel	$126,345,000	$9,371,136	7.4
National Steel	62,000,000	8,930,000	14.4
American Steel & Wire	90,000,000	12,162,530	13.5
National Tube	80,000,000	13,878,365	17.3

[1] Including underlying bonds but not other indebtedness.

[2] In two cases the earnings are not for the exact calendar year; thus the fiscal year of the National Steel Co. ended Feb. 28, 1900, and that of the National Tube Co. ended June 30, 1900.

The contention that the earnings of the United States Steel Corporation and other similar consolidations are due to changed conditions, improved facilities, and the integration of plants and processes, secured by the expenditure of vast sums, is completely answered by a careful study and a patient analysis of the organization and operation of the Federal Steel Co. This ingenious and ably elaborated theory is not consistent with the facts and the facts or the records made by the inventors of the theory.

"The United States Steel Corporation was fashioned after the Federal Steel Co. The organizations were very much alike. * * * The Federal Steel was the parent company; it preceded the United States Steel Corporation, in its essential attributes fashioned after the Federal Steel Co.," says Judge Gary, "and he was in turn president of the Federal Steel and chairman of the board of directors of the Steel Corporation." J. Pierpont Morgan, H. H. Rogers, Thayer, Ream, Samuel Mather, and Robert Bacon were in turn directors in both companies.

Even the secretaries and auditors were the same—Richard Trimble and W. J. Filbert.

Here were the same powerful financial and industrial institutions in close alliance—J. P. Morgan & Co., and the Rockefeller interests—the same men, the same millions; the same instrumentalities were used and employed in the same way.

The "parent company," with all its natural and artificial advantages, had not been up to the time of the organization of the Steel Corporation a marked financial success, and its failure was a concrete example—an object lesson to the powerful interests behind the Steel Corporation. It was manifest, without the ability to limit production, control output, and raise and establish prices, that unlimited capital, vast resources, industry, economy, and inventive genius were vain; that competition was the one impregnable barrier between the new billion-dollar consolidation and the rich and forbidden fruits of extortion and monopoly. Competition eliminated, a full measure of prosperity awaited "integrated" companies and "unrelated units"—obsolete and dilapidated tube plants and the modern mills at Chicago and Lorain.

CAUSES AND CONDITIONS LEADING TO THE ORGANIZATION OF THE UNITED STATES STEEL CORPORATION.

These various consolidations which preceded and in a way produced the United States Steel Corporation have been somewhat elaborately analyzed, since a knowledge of the character, extent, and purposes of these subsidiary concerns is essential to a definite understanding of the conditions which immediately preceded the creation of the holding company under which they were subsequently amalgamated.

> The fundamental causes for the formation of the United States Steel Corporation were substantially the same as those which gave rise to the earlier consolidations already described, namely, restriction or prevention of competition, integration, stock inflation. The same causes, though in varying degrees, were here present, and the same processes were here repeated, though in a more comprehensive manner and on a vaster scale.
>
> A striking and surprising result of the consolidation movement in the late nineties, just described, was that while several of the great steel consolidations aimed at and did secure a substantial degree of monopoly of their particular branches of the business, nevertheless, competition was not thereby destroyed. Instead, it soon developed that the formation of these great consolidations was likely to bring on an era of competition more severe than any the industry had yet seen. The reason for this is plain. At the bottom such "particular branches" were not essentially separate. In the commercial and technical development of the business they tended naturally to overlap. In other words, this unforeseen outcome of consolidation was largely due to the tendency of these great concerns to secure greater integration, to make themselves virtually independent in all stages of production from the ore up. (H. K. S. Rept., pt. 2, p. 7.)

Mr. Temple, the commissioner of the plate structural steel and shafting associations, has aptly described the effect of this effort of the "great concerns to make themselves virtually independent in all stages of production from the ore up."

> Q. Would a concern like the Steel & Wire Co., which was producing finished products, instead of preserving the status quo and buying its billets from some other concern that made a profit on them, attempt to make their own billets, and in that way infringe on what the billet maker considered to be his legitimate business?
>
> Mr. Temple. Certainly, as to all the concerns. For instance, take the National Tube Co. When the National Tube Co. grew to the magnitude it did, one of the first things it did was to put in blast furnaces and put in steel conversion works and make its

> own raw material. Originally in the day of the small concerns, the blast furnace was a separate community. It made pig iron. Over here was a steel works that would buy pig iron from the blast furnace and convert that pig iron into steel. They then sold billets to the tube mills, and the tube mill would buy the billets and would roll those into tubes. With the growth of the business and aggregation of capital in these concerns—I have said tube works, so I will contain myself with the tube illustration—the tube works, instead of buying billets from the steel mill, and the steel mill, instead of buying billets from the blast furnace, would put up its own blast furnace and its own steel mill, buy its own ore lands, and turn into its own coffers the profits of every operation from the ground to the finished product. (Hearings, p. 1723.)

So far as the consumer of finished materials was concerned, these subsidiary companies had obtained a practical monopoly prior to the formation of the United States Steel Corporation. Wire and nails, pipes and tubes, structural shapes, steel hoops and cotton ties, sheets, iron, and tin plate were all controlled by some one of the consolidations which had been organized for the definite purpose of controlling the output and fixing the price of some one or more of these commodities.

Prior to the formation of these immense consolidations these scattered finishing mills, owned by individuals or small corporations, with an investment usually of a few hundred thousand dollars, had not the means—had they cherished the hope—of producing steel in its cruder forms.

The 279 mills of the American Tin Plate Co. were valued at an average of $40 000 each. (Rept. Indus. Com., p. 911.) To have produced the plate bars from which tin plate is made would have required an investment of not less than fifteen or twenty million dollars. (Kennedy hearings, p. 5128.)

The powerful syndicates consolidating these mills had the capital, and "appetite grew with what it fed on." They determined to assimilate all the enormous profits incident to these newly created monopolies. "And the change promptly came. In particular the so-called 'secondary' concerns began to extend their business backward to the production of pig iron and crude steel and the mining of raw materials. This tended to lessen the market and injure the primary concerns, particularly the Carnegie Co. and to a less degree the Federal Steel Co." (H. K. S. Rept., pt. 2, p. 9.)

In other words, the fruits of monopoly had been secured by the centralization under a common ownership and control of the fabrications of steel in nearly all forms most necessary to the needs of the consuming public, but these syndicates failed to devise any adequate plan by which the spoils of this system could be distributed to the satisfaction of the parties who had created it. They had eliminated competition between the producers of steel who sold it to the "ultimate consumer," and at the same time had inadvertently accentuated competition between themselves. Had the steel business been entirely controlled at this time by the Morgan and Moore interests, there is little doubt but that they would in all probability have reached a working agreement in short order and without the friction, the dread of returning competition, or the prodigious issue of securities which preceded the formation of the Steel Corporation.

The National Steel Co. owned and operated all the properties, plants, and processes essential to the production of steel ingots, bars, and billets, and this semifinished steel was in turn converted into the finished product by the Steel Hoop, Sheet Steel, and Tin Plate Companies, with which it was closely allied, all being "Moore concerns."

Could the Federal Steel Co. in like manner have turned its billets, bars, plates, and structural shapes over to the Federal Tube and the American Bridge Co. with which it had banking and financial relations similar to the ties of common interest which united the Moore group, these conflicting interests might have been easily and silently adjusted. But there was Andrew Carnegie. The Carnegie Steel Co. was the lion in the path of the Morgan syndicate in every effort to adjust and establish a thorough control of its proportion of the steel business from the raw material to the finished product.

CARNEGIE PREPARES FOR WAR.

The Federal Steel Co. was essentially a producer of semifinished steel. "It was," said Judge Gary, "a rounded-out proposition and a splendid proposition, except it did not have sufficient finishing mills. It was defective in that respect." (Gary hearings, p. 203.)

At length the "Morgan concerns" determined to appropriate to themselves all the profits incident to the manufacture of steel from the ground up in all those departments of the industry over which they had acquired a greater or less control.

The Federal Steel Co. prepared for the manufacture of structural material, tubes, and universal plates (H. K. S. Rept., pt. 2, p. 10), and the National Tube Co. prepared to erect additional blast furnaces and steel works (H. K. S., 1 B., p. 10). Carnegie had a contract to furnish the bridge company (a Morgan concern) 51 per cent of all its requirements, and he had hitherto supplied the vast demand of the tube company for its raw material.

The Morgan and Moore interests without material conflict were each preparing to make sharp inroads upon that domain of the industry hitherto preempted by the Carnegie Co. It was this apparent ignoring of the Carnegie Co. or a temporary failure to adequately estimate this factor which for a time seemed likely to produce a return of competitive conditions, or, as the directors of the Steel Corporation are pleased to characterize it—a trade war.

This situation is somewhat humorously but graphically described by W. C. Temple, father confessor to many steel pools, and who possessed an intimate and accurate knowledge of the inside history and secret operations and purposes of all these great concerns.

> The interests back of the United States Steel Corporation had at that time prepared for the production by their stock company of the beautiful play, Hamlet, with the most expensive stage settings that Wall Street could produce, costuming never excelled before, and Hamlet was the Laird of Skibo. The cooks who were preparing this meal for themselves and their associates found they had prepared and were ready to bake the finest plum pudding ever concocted financially, but that Mr. Carnegie had all the plums.
>
> They had to buy the Carnegie Steel Co. Mr. Carnegie with his then plant and his organization and his natural resources was in a position where he could dominate the entire situation, and had the United States Steel Corporation not have been formed at about the time it was—some 10 years ago—the steel business, not only of America but of the world, to-day would be dominated by Andrew Carnegie. (Temple, hearings, 1725.)

Had the plans of the Moore and Morgan interests been carried to a successful conclusion, the Carnegie Co. would have lost its largest and richest consumers of plates, structural shapes, sheet bars, and other semifinished products.

Mr. Carnegie acted with celerity and decision; he instantly prepared for war all along the line, making the most elaborate preparations for the production and sale in the open market, especially of those forms of finished materials of which the Morgan concerns then held a practical monopoly. He unhesitatingly entered the industrial arena single handed against the combined capital and resources of the Moore and Morgan interests.

These hostile interests were absolutely unlike in every particular. Carnegie was everything that the interests behind the Steel Corporation *were not*, and he knew and cared absolutely nothing about the methods and devices by which his competitors had amassed hundreds of millions of dollars—on paper at least—and that within the brief period of less than three years.

Until 1900 his concern had been a simple partnership retaining many of the old customs which had prevailed about the simple Kloman Forge with which he had started 40 years before. Its present proportions were due not to the sale of stock, but the return of profits to the working capital of the business.

Thrifty blacksmiths in order to encourage promising apprentices often give them a share in the business. This custom was still followed by the Carnegie Co., and its most capable and trusted managers had started without capital upon a modest share in the business obtained on credit by the purchaser as an incentive to intelligent and effective service. The members of this firm, disdaining "the most expensive stage settings that Wall Street could produce," publicly declared "It has always been the policy of this association from its outset to regard itself as an association of individuals who have united together their fortune, their talents, and their industry to manufacture iron and steel in all branches in the best form, by the best processes, and at the most moderate cost, and by such attention to the true purpose of its organization to produce for those interested in the association the largest profits which can be made. * * * It was the policy of those whose intelligence and faith in results founded the business to associate with themselves from time to time a number of young employees, who, by becoming directly members of the association, would be stimulated to the very best work." (Answer Carnegie et al. to H. C. Frick, hearings, p. 2558.) Carnegie repeatedly declared "That the personnel of its organization was worth more than all the property of the company." (Ib., p. 2558.)

> His plants were at the highest efficiency it was possible to bring plants at that day, in every direction. In addition to that look at the organization he had. * * * With Mr. Frick at the head of the Carnegie Steel Corporation, dictating its business policies so far as he could, without Mr. Carnegie's direct influence; a man like Schwab in charge of manufacturing; with a man like Peacock in charge of his sales department, he was absolutely unassailable and invincible in the steel world. (Statement W. C. Temple, hearings, 1725 and 1726.)

THE "IRONCLAD CONTRACT."

Whenever any member of this association, in the opinion of a sufficient number of his partners, failed to harmoniously cooperate with his partners his connection with the concern was thereby terminated by the terms of an "ironclad contract" to which all were necessarily parties.

Having no issue of stocks or bonds, the books of this partnership were carefully and conservatively kept so as to show the actual value of all its properties, and by this "book value" the rights of retiring partners were determined and the estates of deceased members were settled. The books of this concern were an elaborate and accurate record of the actual cost of its properties. Says James Gayley, one of the parties to this "ironclad contract":

> The book value represented the amount of money actually expended in plants and in investment for property. (Gayley, hearings, p. 309.)

The accuracy of this "book value" was questioned by H. C. Frick in a suit with Carnegie and others in 1900, who maintained that these properties were worth $250,000,000. In an elaborate statement made under oath, Carnegie, Schwab, Gayley, Phipps, Singer, and others stated:

> It is not true that on December 31, 1899, the said association had assets or property either real or personal or tangible in any form * * * which were worth $250,000,000. These books show that the net value on the 31st of the assets of the association was $75,610,104.06.
>
> To a large extent this book value represents the actual cost of the properties represented in the balance sheets of the association. * * * And we aver that the valuation of the assets as shown on said books and balance sheets is a full, fair, and accurate valuation of the same, and that there has not been omitted from such books and balance sheets any asset which should properly find a place thereon. (Hearings, pp. 2558, 2559.)

This association of expert and experienced ironmasters in charge of a concern which they valued by an accurate and detailed inventory at less than $76,000,000, confidently prepared to meet every form of "destructive competition" which the "Morgan and Moore" interests could devise with their eight colossal consolidations capitalized at over $500,000,000. For services rendered in the organization of these companies the underwriting syndicates had received stocks of the par value of $63,306,811, which were subsequently taken over by the Steel Corporation at a valuation of $72,122,090. In other words, these underwriting syndicates by the manipulation of securities had acquired in less than five years within three and a half millions of the total book value of the Carnegie Co. properties, which represented the result of 40 years of strenuous application to their business by the most capable steel makers on the globe.

Carnegie seems to have remained in blissful ignorance of the revolution in methods which characterized the transfer of the seat of the steel industry from Pittsburgh to Wall Street, and unmindful of the enormous sums his competitors were amassing by the capitalization and recapitalization of their various companies. He displays a quaint indifference even to the advantages incident to doing business as a corporation. "If," says he, "you want to keep this country ahead in steel you can not depend upon great 'combinations.'" (Hearings, p. 2419.)

What is most remarkable, these fabulous returns from stock-jobbing operations do not seem to have abated in the least "the ironmaster's" inveterate and old-fashioned antipathy to gambling institutions generally.

> I made them [shares in the Carnegie Co.] as thousand-dollar shares so as not to render them gambling instruments in the stock exchange, * * * because I did not want to have partners that would be tempted to go into speculation. I never bought

> a share in my life in the stock exchange. I never sold a share. I have been, you might say, a monomaniac on the subject of speculation. I have never touched it. * * * I want to say that I am not a stock gambler, and I never in my life associated with stock gamblers. * * * I think that the common stock gambler is one of the worst institutions that a country can have. They are parasites feeding upon values and creating none. (Carnegie, hearings, p. 2538.)

The impending conflict between the Carnegie Co. and the "interests behind the Steel Corporation," as Temple calls them, has been characterized as a "battle of the giants." It was nothing of the kind. It was a contest between fabricators of steel and fabricators of securities; between makers of billets and of bonds.

> The Carnegie interests were apparently in the best position of any of these groups to meet a price war. They had abundant capital and credit, and their securities did not figure on the stock market, while their organization and management were unequaled. (H. K. S. Rept., pt. 2, p. 11.)
>
> This mammoth body owned its own mines, dug its ore with machines of amazing power, loaded it into its own steamers, landed at its own ports, transported it on its own railroads, distributed it among its many blast furnaces, and smelted it with coke similarly brought from its own coal mines and ovens and with limestone brought from its own quarries. From the moment these crude stuffs were dug out of the earth until they flowed in a stream of liquid steel into the ladles there was never a price profit or royalty paid to any outsider. Without any cessation of motion and with hardly any loss of heat this product passed with automatic precision into the multitudinous machines which pressed it into billets, rails, armor plate, bridge structures, beams, and the endless variety of shapes required in modern architecture. Finally these highly finished materials were often conveyed to consumers over the same transportation systems as before, and the profit of every movement, as of every process and change of form, passed without deduction into the exchequer of which was now the Carnegie Steel Co. (Ltd.), a single organization with one mind, one purpose, one interest. (Bridges' Inside History of the Carnegie Co., hearings, pp. 2593–2594.)

Not content with this elaborate and powerful organization, Carnegie prepared for the anticipated contest with the strategy of a general and the confidence of a conqueror. He aimed his first blow at the "National Tube Works, an acquisition of the principal tube mills into one concern, whereby they could get a very handsome profit out of the manufacture of tubes, *and that had been done by Mr. Morgan.*" (Gates, hearings, p. 41.)

This company, notwithstanding an agreement to purchase billets from the Carnegie Co , was preparing to produce its own raw materials. (Hearings, p. 2508.) In retaliation Carnegie prepared to duplicate in a single plant the entire output of this $80,000,000 concern. As related by W. C. Temple:

> Mr. Carnegie had already started out to build at Conneaut the greatest tube works in the world, and the tube business is one of the most profitable finished businesses there is and one that is constantly growing.
>
> He had arranged to build a railroad from Pittsburgh to Conneaut to bring down his ores direct from Conneaut Harbor to his mills and to build up a great industrial center at Conneaut Harbor, and with the completion of that tube mill must come the destruction of the National Tube Co., one of the strongest constituents of the United States Steel Co. (Hearings, p. 1725.)

Carnegie was equally sanguine. He said:

> Gentlemen, I meant to keep on expanding. * * * If I had remained in the business, I would have had a plant at Conneaut that would have astonished the world and which would have distanced all competition in that line. * * * *We were going to begin with making tubes.* But there Charlie Schwab comes in again. He told me that he was satisfied he could build a tube mill that would save $10 a ton over any tube mill existing. * * *
>
> The CHAIRMAN. How much——
>
> Mr. CARNEGIE. $10 a ton on tubes. We had relations with the National Tube Co. We furnished their Bessemer steel. We furnished the steel out of which they made their tubes. We furnished the raw material for the National Tube Co. in great amounts; the Bessemer billets for the National Tube Works. They concluded they would make these themselves and build blast furnaces. That was quite right; we had no objection to that. We concluded that we needed other extensions, and having bought the harbor at Conneaut, * * * we bought the land around the harbor. (Hearings, p. 2358.)
>
> We had been looking for a site where we could put additional works, where we could extend; and it did require much consideration to let us see that if we, having that Conneaut Harbor, put a modern steel plant there, the ore would come there and be dumped from the boat right in the furnace yard. And Mr. Schwab drew plans. The mill was 1,100 feet long, and the ore stood there, and the coke was brought up from our own mines in the cars which had taken the ore down to our mills, and which would otherwise have returned empty; and there we stood with the raw material there, and the finished tubes would come out here [indicating] with all new modern machinery; no men hardly; all rolls conveying the masses without hand labor and all that. Mr. Schwab showed me that plan, just as he did the plan for the great plant for the open-hearth furnaces at Homestead, and I said, "Schwab, what difference can you make?" and he said, "Mr. Carnegie, not less than $10 a ton." Of course, you must remember that the tube works were very old and had been running for a long while, and this project was a total departure. So, he said a difference of $10 a ton. *When*

> *the National Tube Works left us and began to build furnaces fo themselves, then we decided that we would build at Conneaut* (Hearings, pp. 2509–2510.)

This statement is an unconscious commentary on the extortion ther practiced by the National Tube Co. Five dollars a ton would have been a legitimate profit on tubes. Carnegie, with a modern plant capably conducted, could have made tubes at a profit at $5 a ton less than the actual cost of production by the National Tube Works which, as Gates declares, "Mr. Morgan had just finished." (Hearings, p. 40.)

The news of this projected tube plant was received with mingled emotions of anger and consternation by the National Tube Co., as evidenced by the following entry in the minutes of its board of directors, January 15, 1901:

> Mr. Converse [president of the tube company] said that there were rumors that the Carnegie Co. was about to install and operate a tube works with a capacity of 280,000 tons per annum. It is well known, the tendency lately so conspicuous to establish a community of ownership or a unified control over great industries as the only means of restraining destructive competition, led to the incorporation of various great companies. * * *

"During the 18 months this corporation has run there has never been a time when it could not have manufactured to advantage and profit material in competition with nearly all the numerous industrial groups, including the Carnegie Co., but the policy of the management so far has been that except forced by self-protection this company would not displace a ton of its neighbor's product by entering any other lines than strict tubular goods.

"It has rigidly confined itself to this principle up to this time. * * * In all the arrangements between the National Steel, Republic, American Sheet Steel & Plate, and others of the industrial steel groups, *it has been the unwritten law that each group should confine itself to the fabrication of its own specialties and should voluntarily refrain from using a constant surplus of material by the production of the special product of its neighbors. If this unwritten law is to be ruthlessly disregarded by the Carnegie Co. it will, of course, have a broader significance than the mere competition with our own products.*" (MacRae's Rept., p. 4278.)

Carnegie next invaded the heart of the territory of the Federal Steel Co., the "cherished project" of the Morgan group. Having forced this company into a 40-year contract by which its principal ore road, the Vermilion & Iron Range, was obligated to haul 1,500,000 tons of ore every three years from the Minnesota ranges to the lakes, and to pay to the Carnegie Co. a rebate of 40 cents per ton (MacRae Rept., p. 4103), he prepared to enter the western territory with his finished products.

In February, 1901, the Carnegie Co. entered into an agreement with a syndicate formed by George J. Gould and others "for the purpose of constructing or purchasing certain lines of railroad from Toledo, Ohio, to the city of Pittsburgh, Pa., with branch lines to Cleveland and other towns in Ohio, and in the States of Pennsylvania and West Virginia." This syndicate agreed to proceed with all "diligence and dispatch." In consideration for the immediate purchase or construction of this vast system—literally lacing the territory hitherto preempted by the Federal Co.—

> The Carnegie Co. agrees to give to said syndicate lines for transportation over said lines to all points reached by said lines and connections *one-fourth of all the traffic, including ore, coal, and coke, controlled by said Carnegie Co.* and its controlled or affiliated companies, upon or reached by the lines of said Union Co., as it is now or may hereafter be constructed, or on lines owned and controlled by said Union and Carnegie Cos., or which the said syndicate lines may reach direct or through switching arrangements with other railways, etc. (MacRae Rept., p.4377.)

Carnegie's operations extended from the head of Lake Superior to the Atlantic seaboard. With rebates of approximately 50 per cent of the through rate from the Vermilion Range to Lake Superior, a 50-year contract with the Rockefeller interests, for an annual supply of 1,200,000 tons of Mesabi ore at a royalty of 25 cents per ton (Hearings, p. 2596) transported by his own steamship lines to Conneaut and thence to Pittsburgh via the Bessemer & Lake Erie Railroad (of which he had acquired control), Carnegie commanded facilities for assembling his raw materials which no competitor could hope to approach.

Having secured virtual control of the extension of the Wabash Terminal Railroad and its connections as far as Toledo on the west, he turned his attention to the east.

> There were reports at this time that the Carnegie interests were contemplating the construction of a railroad from Pittsburgh to the Atlantic seaboard. This threat, if made good, would have created an extremely disturbing factor in the trunk-line situation. (H. K. S. Rept., pt. 1, p. 105.)

And the Carnegie interests were preparing to reach the ultimate consumer not only with semifinished steel structural shapes, rails, and tubes, but to duplicate the products of all their competitors. John W. Gates declares, "I guess he was threatening the whole line." (Hearings, p. 40.)

> In such a contest it was apparent to all that the Carnegie Co., while likely at first to lose some business, might be expected in the long run to maintain, and even to increase, its dominating position in the industry. Its long-established business, the modern character of its plants, its efficient technical and commercial organization, as well as its strong financial position,

> made it easily superior to any of its competitors. It had a distinct advantage in all these respects over even the Federal Steel Co., which was its largest rival, but whose plants were for the most part less modern and also widely separated geographically. There was no question that if the Carnegie Co., with its unlimited means and efficient organization, went into the manufacture of wire, tubes, sheets or tin plate, it would be more than able to hold its own against the respective large consolidations which produced those products, and which in their effort to monopolize the business had been constrained to include in their respective organizations many plants of inferior character. (H. K. S. Rept., pt. 1, p. 104.)

Says W. C. Temple:

> If they had not purchased his interests, Carnegie would have gone back to his old policy of "cattle work along the border."
>
> The CHAIRMAN. Destructive competition?
>
> Mr. TEMPLE. I do not think there is any question about that.
>
> The CHAIRMAN. Did your people have any fear that if they did not get Carnegie they would have trouble?
>
> Mr. TEMPLE. They knew it.
>
> Mr. BARTLETT. Let me ask you in what way they would have trouble—by cutting prices and reducing the prices of the product or by destructive competition?
>
> Mr. TEMPLE. Have you ever seen people who were scared of "ha'nts" down in your country? * * * Did you ever find one of them who could formulate to himself exactly what form that "ha'nt" was going to take if it approached him? * * * I will allow that to answer your question, if you will permit it. (Hearings, pp. 1726–1727.)

But this industrial specter left no doubt as to its form and purpose; it was open and aggressive competition all along the line.

In an interview in the London Iron and Steel Trades Review, Mr. Carnegie declared:

> Yes; we have been erecting several new departments, including what I believe will be the largest axle factory in the world. Why, it may be asked, should steel makers make plates for other firms to work up into boilers when they can manufacture the boilers themselves; or beams and girders for bridges when they can turn out and build up the completed article; or plates for pipes when they can make the pipes? I think the next step to be taken by the steel makers will be to furnish finished articles ready for use. In the future the most successful firms will be those that go furthest in this direction. (Hearings, p. 2510.)

Just as he had prepared by an estimated outlay of $12,000,000 (hearings, p. 2620) to duplicate and demolish Morgan's $80,000,000 tube company, it was plain that he had at last determined in the same manner to puncture all these huge and inflated monopolies, which, in the last four or five years, had been incubated in Wall Street and incorporated in New Jersey. And nobody knew the inherent weakness of these conglomerations of efficient and inefficient, modern and obsolete, mills so well as the syndicates which had consolidated them.

> In the conversion of the heathen, missionaries have found it useful to describe the condition of the damned before presenting the pictures of the joys of the blessed. It was on some such principle that the threat of industrial war was thus made by the Carnegies before the blessings of cooperation and consolidation were set out before the vision of the alarmed financiers of the country. The panic produced by the double threat of the Carnegies to build a rival tube works and to enter into competition with the great Pennsylvania has been graphically described by a recent magazine writer.
>
> Either project as a threat would have been alarming. The two together, as imminent and assured accomplishments, produced a panic. And a panic among millionaires, while hard to produce, is, when once under way, just as much a panic as a panic among geese. They ran this way and that; they hid one behind another; they filled the newspapers with their squawkings; they reproached, implored, accused each other. At last they ran to their master—Morgan—and he negotiated with Carnegie. (Bridges, Inside History of the Carnegie Co., hearings, p. 2621.)

Morgan immediately communicated with James J. Hill, Charlie Schwab, and others in an effort to find some way to "stop Carnegie from building this railroad and building this tube works." (Gates, hearings, p. 31.)

> I believe, perhaps, if unrestricted and unchecked destructive competition had gone on, the Illinois Steel Co. would undoubtedly have been driven out of business, and perhaps, I might say more. I do not say it with a view of casting any reflection upon anyone's management, but it is not at all certain that if the old management or the management which was in force at one time had continued *the Carnegie Co. would not have driven entirely out of business every steel company in the United States.* (Statement Judge Gary, hearings, p. 220.)

There is nothing, however, in this record to show that such concerns as the Lackawanna, the Cambria, or Jones & Laughlin, were in any particular danger of losing anything more than a share of the inordinate profit, which had resulted from the successful organization of these various monopolies, which for the time had almost totally eliminated competition between the manufacturers of all forms of finished steel.

With the American Steel & Wire Co. and the Moore and Morgan groups the case was entirely different. They had capitalized their "merger values" at approximately $400,000,000, and a return of competition meant the destruction of that immense and artificially acquired "earning power," and the utter demoralization of the stock market.

> This critical trade situation was intensified because of the importance which the securities of several of these steel concerns had assumed on the stock market. A period of violent competition in the steel industry would inevitably have been followed by a great decline in the value of these securities. This would have been very embarrassing to the financial groups which were behind these consolidations. A more important matter was that the financial backers of some of these steel concerns had extensive commitments in other directions which might be jeopardized by such an acute struggle in the steel industry. From the standpoint of these financiers, therefore, the situation presented at once a great danger and a great opportunity.
>
> From a financial point of view there were four important groups, which were more or less distinct, namely, "Morgan," "Moore," "Carnegie," and "Rockefeller." * * * It is evident, therefore, that, both from the point of view of the iron and steel industry and that of the stock market, there was a great inducement to avert the threatened outbreak of violent competition between these rival interests. A steel war might have meant a sudden end of the extraordinary period of speculative activity and profit. On the other hand, an averting of this war and a coalition of the various great consolidations, if successfully financed, would be a tremendous "bull" argument. It would afford its promoters an opportunity for enormous stock-market profits through the sale of its securities. * * * It was clear to everyone that no consolidation of this sort could be made successful unless it included the Carnegie Co., which was the most powerful factor in the situation, which had long been noted for its aggressive tactics, and which, as above shown, had precipitated this crisis. Moreover, there can be little doubt that many interests in the steel industry regarded Mr. Carnegie's personal influence as a menace to themselves and their businesses and desired to secure his retirement from the trade. The primary solution of the situation, therefore, from the standpoint of these interests, was to buy out Mr. Carnegie. It was realized that this would be an extremely expensive transaction, which would require the cooperation of the leading interests. The purchase of that concern obviously could not be financed with cash. Arrangements were, however, effected with Mr. Carnegie for taking over his large holdings in his company in exchange for bonds of the new consolidation. (H. K. S. Rept., pt. 1, pp. 10 and 11.)

In the light of the evidence produced before this committee there can be no shadow of doubt that the problem which now confronted the interests behind the United States Steel Corporation was not the purchase of a *mill, but the retirement of a man.*

If further demonstration is needed, it is afforded by the fact that Mr. Morgan, who engineered this deal, a few months prior to its consummation refused to furnish a mere modicum of the sum subsequently paid for Mr. Carnegie's interest in these plants, at a time when the actual value of the property was the principal consideration and before Carnegie had precipitated this crisis.

> Toward the end of March, 1899, overtures were made by Ex-Judge W. H. Moore, of Chicago, for the purchase of the Carnegie-Frick properties with a view to combining them. This time an effort was made to get a price on Andrew Carnegie's individual holdings of stock in *the two companies carrying, as they did, control, etc.* * * * Carnegie demanded a million dollars for a 90-days' option on his entire interests at a price of $157,950,000. (Bridges' Inside History of Carnegie Co; hearings, p. 2612.)
>
> This transaction is recited in detail in a sworn statement made by Mr. Carnegie, March 12, 1900. (Hearings, p. 2560.)

The second option for $250,000,000 for all the property throws no light on the real transaction, since this option was obtained by Frick-Phipps and others who intended to go into the proposed new consolidation, and their share, estimated at $90,000,000, would have involved no actual outlay, but a simple exchange of securities. Carnegie's interest demanded an actual outlay of bullion or bonds, and in this case it meant both.

At this time Mr. Morgan seems to have been lacking in any appreciation of the potency in the industrial world of this man who was essentially and only an "ironmaster," who would not tolerate the listing of his stocks on the exchange, and declared with emphasis "I am no stock gambler, and I never in my life associated with stock gamblers."

No man, perhaps, knew the strength and the weakness of the great financiers who were parties to these immense transactions so well as W. C. Temple.

> Mr. Frick is a far-sighted, shrewd business man. He realized even before the formation of the United States Steel Corporation more clearly, I think, than any one man in the steel world the gradual development and great development in the steel industry. Mr. Morgan is a great man. Mr. Frick obtained from Mr. Carnegie an option on the Carnegie steel plant for approximately $160,000,000. * * * There was a book value there of approximately $119,000,000. Mr. Frick got an option for $160,000,000. It was common rumor at the time, although I can not testify as to my own knowledge and belief, that Mr. Frick and Mr. Mellon, or the Mellon estate, agreed to furnish or to raise $80,000,000 of this money, and they went to Mr. Morgan to get the other $80,000,000, and Mr. Frick laid before Mr. Morgan very fully the possibilities of the Carnegie Steel Co. *Mr. Morgan turned down the proposition, claiming that the price was too high for the property,* I understand, which cost Mr. Frick and his one or two associates some million or a million and a quarter dollars, and which they paid to Mr. Carnegie for this very valuable option.
>
> Mr. BARTLETT. Forfeited?

> Mr. Temple. Yes, sir. When I, in my own mind, stack up Mr. Morgan as against Mr. Frick, the thing that always comes prominent is this, that when Mr. Frick considered the purchase of the Carnegie Co. and could buy it at $160,000,000, Mr. Morgan thought it was too expensive, and yet Mr. Morgan turns around inside of three years and pays between $500,000,000 and $600,000,000 for the same property, which he did not consider worth $160,000,000 when Mr. Frick got it.
>
> The Chairman. Was there any improvement in that property during that time?
>
> Mr. Temple. None to amount to anything; comparatively little. The market value of the securities that entered into that transfer practically at the time the transfer was completed made each of the junior partners of the Carnegie Steel Co. practically $5,000,000 for each 1 per cent interest. That I happen to know. That comes very close to being $500,000,000 for the whole thing, and Mr. Carnegie got a little the best of it. He got better than his junior partners did; so I do not think I am overrating the mark when I say between $500,000,000 and $600,000,000. (Statement Temple, hearings, pp. 1723, 1724.)

It is not surprising that Mr. Morgan should hesitate to pay $160,000,000 for approximately a half interest in a concern whose owner had recently sworn had no actual or tangible value in excess of $75,610,104.06, and whose total assets, according to the balance sheet of the Carnegie Co. (Ltd.) on March 1, 1900, amounted to $101,416,802.43. (Hearings, p. 2618.)

The syndicate which had consolidated tube mills valued at $19,000,000 and capitalized them at $80,000,000 and had authorized an issue of $200,000,000 of stock in the Federal Steel Co. on a basis of less than $33,000,000 of actual property could hardly be regarded as an impecunious purchaser.

The difference was due not to an increase in the value of the property or the state of the market, but the changed attitude of its owner. In his negotiations with Mr. Frick, Mr. Morgan was valuing steel mills. Now he was forced by changed conditions "to stop Carnegie" at any price.

> The conclusion is inevitable, therefore, that the price paid for the Carnegie Co. was largely determined by fear on the part of the organizers of the Steel Corporation of the competition of that concern. Mr. Carnegie's name in the steel industry had long been synonymous with aggressive competition, and there can be little doubt that the huge price paid for the Carnegie concern was, in considerable measure, for the specific purpose of eliminating a troublesome competitor, and Mr. Carnegie personally in particular. This, it may be noted, was the interpretation generally placed upon the transaction in trade and financial circles at the time. (H. K. S. Rept., pt. 1, p. 165.)

After Frick had failed, after the most strenuous efforts to raise $80,000,000 from Morgan on the Carnegie properties, having secured the other half of the purchase price through the aid of the Mellons, and as a result forfeiting over a million dollars paid for the option, it was manifest that these properties could not be obtained for a cash consideration. Both parties seeing the necessity for an exchange of securities on some basis, in the event Carnegie's holdings were ever to be taken over by those most anxious to eliminate him from the steel business, the Carnegie Co. and the H. C. Frick Coke Co. were merged, and incorporated as one concern, the Carnegie Steel Co., and that it might have securities in abundance for purpose of exchange, when the exigency arose, had an authorized capitalization of $160,000,000 and an authorized bond issue of the same amount. (H. K. S. Rept., pt. 1, p. 85.)

When the consolidation was finally consummated for $159,450,000 of bonds and $160,000,000 of stock of the Carnegie Co., the United States Steel Corporation issued $492,000,000 of its securities as follows:

For $159,450,000 of Carnegie Co. bonds (bonds)		$159,450,000
For $96,000,000 of Carnegie Co. stock (bonds)		144,000,000
For $64,000,000 of Carnegie Co. stock	preferred stock	98,277,120
	common stock	90,279,040
Total		492,006,160

(MacRae's Rept., pt. 1, Exhibit No. 27.)

It will be remembered that in this transaction, Carnegie and his partners did not share alike. As Mr. Temple stated:

> Mr. Carnegie got a little the best of it. He got better than his junior partners did.

J. Howard Bridge, in discussing the conditions upon which Mr. Carnegie's personal interests were absorbed, says:

> Had all the stockholders been subject to these terms, it would have meant that the $160,000,000 of .the Carnegie Co.'s stock would have been exchanged for United States Steel Co.'s stock as follows:

7 per cent cumulative preferred	$240,569,280
Common stock	225,697,760
	466,267,040
Add $160,000,000 bonds exchanged for the same amount of Carnegie bonds	160,000,000
Total	626,267,040

At the time of purchase, the bonds and the preferred stock were considered worth par, and the common stock 50, making the total amount paid at that time $447,416,640. (Hearings, pp. 2622, 2623.)

Thus one single concern, under a threat to destroy monopoly secured by these confederated consolidations, demanded "this king's ransom" as the "price of peace," and the price was paid.

ROCKEFELLER INTERESTS.

There remained one, and only one individual or interest, powerful enough to obstruct or deter this far-reaching confederation of consolidations, in the establishment of prices in the steel industry. The "Morgan" and "Moore groups," were cooperating and harmonious and Carnegie had retired. "Rockefeller" remained to be reckoned with.

As far back as 1893 he had secured a firm and extended hold upon the very foundation of the whole business—its ore reserve.

The Lake Superior Consolidated Iron Mines secured long leases or the title in fee to from 300,000,000 to 400,000,000 tons of iron ore on the Mesabi Range which Judge Gary truly describes as "the finest in the world." (Hearings, p. 86.) Almost without exception other ore bodies on this continent are of a hard and rocky texture or lie at a greater or less angle to the horizon, and can only be mined by the sinking of shafts or other like expensive methods. This materially increases the cost of mining. Ores upon the Gogebic and Menominee Ranges in Michigan or the Vermilion in Minnesota, for instance, are mined at approximately $1 per ton.

The ore upon this vast range lies horizontally and from a few inches to not exceed 160 feet below the surface of the earth, its structure is very like a compact body of coarse sand or gravel. After the overburden is removed it can be readily mined at a cost of a few cents a ton by a steam shovel, the average cost of the whole operation does not exceed 15 or 20 cents per ton. (Gary hearings, p. 86.)

As described by Mr. Herbert Knox Smith:

> This company was a consolidation of the Wetmore, Merritt, and Rockefeller interests, but was commonly known as a Rockefeller concern. The Wetmores and the Merritts, in the development of the mining properties and the Duluth Missabe & Northern Railway, had become heavily indebted to the Rockefeller interests, with the result that when the panic of 1893 occurred, they were practically bought out by the latter. (H. K. S. Rept., pt. 2, p. 147.)

This great ore body was first discovered by Alfred and Leonidas Merritt in 1891. They formed one company for the development of these mines and another for the construction of a railroad from the Mesabi Range to Lake Superior. Sixty-seven miles of what is now the Duluth, Missabe & Northern Railroad was built at a cost of $660,000 and extending from the mines to a point called Stoney Brook on the St. Louis River, where it made physical connection with the Duluth & Winnipeg, this road carrying the ore to docks at Superior or Duluth Bay. (Hearings, pp. 1846–1847.)

In order that they might extend their railroad into Duluth and construct ore docks there and for other purposes, the Merritts borrowed about $420,000 from Rockefeller, hypothecating stock in these mining and railroad companies to the extent of many millions of dollars. This loan was called on short notice during the panic of 1893, and the Merritts lost their interest in the railroad and the Lake Superior ores, and Rockefeller obtained them.

In detailing the transaction before this committee, Leonidas Merritt said:

By whatever means these properties may have been obtained this fact remains unquestioned: They were secured, together with the Duluth, Missabe & Northern Railroad, for a sum not exceeding $420,000, and that the mines and railroad were immediately consolidated in a corporation, the Lake Superior Consolidated Iron Mines, capitalized at $29,413,905, which stock was, upon the formation of the United States Steel Corporation, exchanged for an issue of $39,708,771 of preferred and a like amount of common stock, or a total of $79,417,542, and that the ores thus secured exclusive of the railroad properties have subsequently been valued by Charles M. Schwab and other officials of the Steel Corporation at over $500,000,000. Such a valuation, as will be subsequently shown in a discussion of ore values, is grossly excessive.

> This is further indicated by the prices of the stock (before formation of United States Steel Corporation). Shortly after the company was organized its shares are reported to have sold at about $75 to $80, but in the depression of the middle nineties they sold as low as $9 a share, and as late as 1898 they sold at $25 per share. The highest reported price in the boom of 1899 was about $60 per share; during 1900 it was quoted around $75 per share. Just prior to the organization of the Steel Corporation the stock advanced very sharply, but this was obviously due to the very favorable terms upon which it was taken over by that concern, namely, 135 per cent in United States Steel preferred stock and 135 per cent in United States Steel common. (H. K. S. Rept., pt. 2, p. 148.)

The reasons for issuing to Mr. Rockefeller over $79,000,000 in the corporation's securities for properties which eight years previously had cost him $420,000 were twofold, viz: This company held by far the largest and richest ore mines on the continent, and it was highly probable that the Rockefeller interests, if they continued to retain control of this iron range, would go still more extensively into the business of manufacturing iron and steel products. The opportunity to at once secure these extensive holdings and to eliminate their last formidable competitor induced those in control of the United States Steel Corporation in the payment of an apparently exorbitant price.

Second. It was a necessary step in any effort to secure an effectual monopoly of the iron ores of the country.

A valuation of 75 per cent, the highest point reached by the stock of this concern for six or seven years prior to its absorption by the Steel Corporation, is more than fair; it is manifestly excessive.

This would give the Consolidated Iron Mines an actual value of something less than $25,000,000.

With the absorption of the Lake Superior Consolidated Iron Mines, "the financiers behind the United States Steel Corporation completed the cycle, not only of the 'interests' but of the industry."

In order that the "Morgan group" and the "Moore group," who now remained in undisputed control of the steel situation, might work in more perfect harmony and secure a satisfactory division of the profits, the parties most directly interested in the elimination of Andrew Carnegie were incorporated into one gigantic concern.

The Federal Steel Co., the National Tube Co., the American Bridge Co., the American Steel & Wire Co., the National Steel Co., the American Steel Hoop Co., the American Sheet Steel Co., the American Tin Plate Co., the Carnegie Co., and the Lake Superior Consolidated Iron Mines became, on April 1, 1901, subsidiaries of the most vast and powerful holding company on the globe, and capitalized at the prodigious sum of $1,399,051,229. Judge Gary, before the Ways and Means Committee, "guesses" that $1,000,000,000 of this capitalization of the Steel Corporation was "capitalized profits." His guess is approximately correct.

The actual value of these nine subsidiary companies was approximately as follows:

The cost of the reproduction of these plants and property was estimated, as far as each estimate could be obtained, by experts. As to others, the valuation had to be based in part on the market value of the stocks. We have not adopted the earning capacity as a basis of value.

Federal Steel Co	$32, 741, 454. 70
National Tube Co	19, 000, 000. 00
American Bridge Co	12, 670, 000. 00
American Steel & Wire Co	40, 000, 000. 00
The National Steel Co	25, 000, 000. 00
American Steel Hoop Co	11, 000, 000. 00
American Sheet Steel Co	17, 000, 000. 00
American Tin Plate Co	13, 825, 000. 00
Carnegie Steel Co	160, 000, 000. 00
	[1] 331, 236, 454. 70

In this estimate is included $16,600,000 working capital of the American Steel & Wire Co.; $3,000,000 held by the Steel Hoop Co.

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[1] There is some evidence that this "book" value of the Carnegie Co. was possibly too conservative, and this property has been valued by Julian Kennedy at approximately $15,000,000 and for that reason we have taken this valuation.

for a like purpose. The actual value of the plants of both these concerns was only $26,400,000 (H. K. S. Rept., pt. 2, p. 187), and the Lake Superior Consolidated Iron Mines, $25,000,000—one-sixth interest Oliver Iron Mining and Pittsburgh Steamship Cos., $421,700.

It will be remembered that at the time these various concerns were formed their stocks were watered to what appeared to be the maximum of saturation, viz, $331,236,454.70; actual value in plants, ore, and transportation properties had been capitalized at $883,607,105.76.

At this time the organizers of the Steel Corporation seemed obsessed with the idea that there was no limit to the capacity of the American public for the assimilation of securities; and this less than $400,000,000 worth of property was accordingly capitalized at $1,399,051,229, or approximately 300 per cent more than the actual cost of constructing the assembled manufacturing plants and transportation companies, plus a fair valuation on its ore properties. This corporation was formed, says the Commissioner of Corporations, during "an extraordinary period of speculative activity and profit," and its formation was calculated to afford its promoters an opportunity for enormous stock-market profits through the sale of its securities. (H. K. S. Rept., pt. 2, p. 105.)

The syndicate managers did not put them all upon the market, however, immediately upon the formation of the corporation; they appropriated about 1,300,000 shares of stock, one-half preferred and one-half common, of an aggregate par value of $130,000,000, for services rendered in putting this colossal concern together, and for furnishing $28,000,000 working capital with which the new billion-dollar consolidation was to commence its operations.

There can be no question that this huge compensation to the syndicate was greatly in excess of a reasonable payment. For the $28,000,000 cash consideration the syndicate was properly to be reimbursed, and, furthermore. was entitled to additional compensation for raising that amount. Moreover, the syndicate was entitled to some compensation for its other services. Clearly, however, these services can not be considered as worth the huge sum actually allowed. The syndicate managers expressly reserved the right at any time in their own discretion wholly to abandon the transaction. * * *

It should be pointed out that the syndicate managers were prominently identified with the management of several of the companies acquired by the Steel Corporation, and also with the management of the corporation itself. Three partners of the firm of J. P. Morgan & Co., the syndicate managers, were on the directorate of the corporation, and one of them was also chairman of the finance committee. Moreover, the underwriting syndicate included the heads of several constituent companies. These facts are entitled to great weight in connection with the enormous commission allowed to the syndicate. In other words, as managers of the Steel Corporation these various interests virtually determined their compensation as underwriters.

This extravagant compensation to the underwriting syndicate may fairly be cited as further evidence of a general disposition toward excessive issue of securities.

This huge commission, it should be noted, followed very liberal commissions allowed at earlier dates to the promoters of several of the various constituent companies. Assuming that of the total of, roughly, $65,000,000 par value each of preferred and common stock allowed the Steel Corporation underwriting syndicate $28,000,000 of each class (a common basis of compensation in such cases) was for the cash consideration noted there would be left as a commission alone $37,000,000 par value of each class, or a total of $74,000,000 par value. Adding to this the amounts allowed for similar commissions in the case of constituent companies at the dates of their respective organizations, and taking into account that the stock so issued by constituent companies received the same terms of exchange from the Steel Corporation as other stock of the same class, it would appear that of the Steel Corporation's stock in 1901 at least $150,000,000 (this including over $40,000,000 of the preferred) was issued either directly or indirectly for such promotion or underwriting services, this being over and above the enormous amounts of common stock issued as a bonus for property and for cash. (H. K. S. Rept., pt. cc, pp. 38–39.)

This enormous "residue," as it was termed, yielded a very large profit to the syndicate. At valuations of 44 for the common stock and 94 for the preferred stock (the average prices, respectively, at which these shares sold during the first year after the organization of the Steel Corporation) the total value of these stocks thus delivered to the syndicate would have been approximately $89,700,000. As a matter of fact, it appears that the amount actually realized by the syndicate was about $90,500,000. After reimbursing the syndicate for the $25,000,000 cash capital raised by it, and also for the $3,000,000 incurred in expenses, the syndicate managers paid out in profits to syndicate members substantially $50,000,000. Before distributing these huge profits, however, J. P. Morgan & Co., as syndicate managers, reserved as their compensation 20 per cent of the total profits. The total profits consequently were one-fourth greater than the amount thus distributed to syndicate members, or, in other words, they were, roughly speaking, $62,500,000. * * *

A very important consideration to point out is that while the syndicate was, from the standpoint of the prestige and reputation of the bankers identified with it, nominally compelled to see the organization of the Steel Corporation successfully through, there was no legal obligation of this sort whatever. Instead a circular of the syndicate managers to the stockholders of the various constituent concerns which were to be acquired stated very positively that the syndicate managers might at any time wholly abandon the transaction, in which event the stockholders in the acquired companies would have no claim whatever against the syndicate managers. This is shown by the fourth paragraph in the official circular of J. P. Morgan & Co., the syndicate managers, as follows:

> The undersigned are authorized to proceed with the proposed transaction whenever in their sole judgment a sufficient amount of the stocks of said companies or of any of them shall have been deposited. *They reserve the right, at any time in their discretion, to wholly abandon the transaction* and to withdraw their offer herein contained, as to all the depositors, by publication of notice of such withdrawal in two daily newspapers in the city of New York; and in that event all the deposited shares shall be returned without charge upon surrender of the respective receipts therefor. *In case of any such withdrawal* of the offer hereunder as to all or to any depositors, *such depositors shall have no claim against the undersigned,* and shall only be entitled to receive their deposited securities upon surrender of the respective receipts therefor. (H. K. S. Rept., pt. 1, pp. 244–246.)

Neither the liability incurred nor labor involved in this transaction.

In the formation of the American Tin Plate, Sheet Steel, and other Moore companies, hundreds of isolated plants were bought outright, and the transaction involved the actual expenditure of millions of money.

The same thing was done in the assembling of plants and the various organizations and the reorganizations of the American Steel & Wire Co. In the formation of the National Tube Co. Morgan & Co. employed the most skilled engineers, who spent months in inspecting and in placing a valuation on these various tube plants.

In the formation of these monopolies among the finishing mills the promoters were making an experiment and taking a chance on a device for the evasion of laws against restraint of trade which had never before been put to a practical test.

There was some excuse (though not a sufficient one), some palliation, at least, for the staggering sums charged by these financiers for their protection and aid to the mill owners all over the country, who, having failed to successfully evade the law and enforce pooling agreements at the same time, were willing to try as a dernier resort the expedient of an all-embracing holding company; but the experiment had been tried and, so far as securing immunity from prosecution and enabling the contracting parties to fix prices ad libitum to the ultimate consumer were concerned, had proved in every way successful.

The formation of these subsidiary companies into a still larger holding company, which was in all respects a counterpart of the Federal Steel and other holding companies, involved nothing more than the monotonous repetition of the old process of the inflation and exchange of securities, which had been repeated a dozen times by the very individuals and interests involved in this transaction.

There were no properties to be assembled. As far as Carnegie was concerned, conscious of his superiority, and keenly alive to the demoralized and terror-stricken condition of his competitors, he had only to demand and they to pay such sum as he might demand for his permission to these concerns to do business in the future by avoiding instead of meeting competition. The purchase of the Carnegie plants involved not a negotiation so much as a capitulation.

There were no properties to assemble or to value. The owners and officers of these various concerns had literally thrown their securities at the feet of J. P. Morgan & Co. and were imploring that powerful house to save them from the wrath to come. It was only necessary for the syndicate to determine the relative value of the various properties, issue more of the new stocks than the old, pocket 1,299,975 shares in the course of the performance, and start the newcomer on its way to pursue the same policies and adopt the same industrial devices which had already been tried by the subsidiary companies prior to the time Andrew Carnegie began to threaten competitors. No engineers were required and no expenditure of money involved in determining the value of these plants and properties.

H. H. Rogers and afterwards John D. Rockefeller and John D. Rockefeller, jr., at various times on the directorate of the Steel Corporation, were prepared to see that the Lake Superior Consolidated Iron Mines received due consideration. Converse, president of the National Tube Co.; Gary, of the Federal Steel; D. G. Reed, president of the American Tin Plate Co.; Percival Roberts, jr., of the American Bridge Co., were all directors of the Steel Corporation.

These daring financiers, using the steel industry as a basis for the fabrication of "bonds," not billets, in less than 40 days had created new values, on paper at least, to the extent of over $500,000,000.

When it is remembered that even by the president of the Steel Corporation it was admitted "that Mr. Morgan, the responsible head of the financial house that had the responsibility of bringing out this concern, should have the opportunity of being consulted as a member of the board of directors or otherwise" (Minutes finance committee, July 2, 1901, MacRae's Rept., p. 3793); that George W. Perkins, chairman of the finance committee, Robert Bacon, and Charles Steele, directors. were also members of the firm of Morgan & Co.; that the syndicate not only organized but for years afterwards admittedly controlled the action and directed the policies of the Steel Corporation, this exorbitant charge becomes still more inexcusable. As stated by the Commissioner of Corporations, these syndicate managers, finding themselves in virtual control of the unlimited resources of the Steel Corporation, "virtually paid themselves" out of its securities which were so lavishly issued, in absolute disregard to the rights of the stockholders or the welfare of the industry.

For the purpose of acquiring the subsidiary corporations and reimbursing the syndicate the corporation agreed to issue 4,249,985 shares of preferred and 4,249,985 shares of common stock and $304,000,000 5 per cent gold bonds.

This matter was controlled and determined solely by the board of directors of the Steel Corporation, and the "Morgan group," the old officials of the Federal Steel, National Tube, and American Bridge Cos., together with the firm of J. P. Morgan & Co, controlled that board of directors.

In all matters of grave or vital importance the board of directors acted through its finance or executive committees. Immediately after the organization of the Steel Corporation, at a directors' meeting April 9, 1901, these dominating committees were constituted as follows:

> Six directors elected, who, besides the president and the chairman of the finance committee, shall constitute the executive committee: Elbert H. Gary, Daniel G. Reed, William Edenborn, E. C. Converse, Percival Roberts, and Charles Steele, nominated and elected.
>
> Also four directors, who, besides the president and chairman of the executive committee, shall constitute the finance committee: Robert Bacon, Henry H. Rogers, Norman B. Ream, and P. A. B. Widener, nominated and elected. Mr. Bacon was made chairman. (Minutes board of directors, Apr. 9, 1901, MacRae Rept., p. 3753.)

E. H. Gary, chairman of the executive committee and chairman of the board of directors, was ex-president of the Federal Steel Co. (a Morgan concern). C. M. Schwab, another member, considered "Mr. Morgan the responsible head of the financial house that had the responsibility of bringing out this concern, who should be consulted on all occasions, whether as member of the board of directors or otherwise."

Percival Roberts, was president of the American Bridge Co. (another Morgan concern) of which J. P. Morgan & Co. were the duly appointed fiscal agents and bankers. (MacRae Rept., p. 4173.)

E. C. Converse was president of the National Tube Co. "which Mr. Morgan had just put together" (hearings, p. 31), and Charles Steele was a member of the firm of J. P. Morgan & Co.

The influence of Morgan & Co. was not less dominant in the finance committee. Its chairman, Robert Bacon, was also a member of the firm of J. P. Morgan & Co. The minutes of this committee were kept by George W. Perkins. Mr. Perkins served as secretary to this committee until May 29, 1901. He became its chairman on November 20, and for six months thereafter served as both chairman and secretary.

The directors of the Steel Corporation unequivocally admit the dominating influence of J. P. Morgan & Co. in all the vital affairs of the Steel Corporation, as evidenced by the following colloquies:

> The CHAIRMAN. I find this entry—"Judge Gary thinks Mr. Morgan as the responsible head of the house that had the responsibility of bringing out this concern, should have the opportunity of being consulted as a member of the board of directors or otherwise."
>
> That was the policy from the beginning, was it not, of the United States Steel Corporation?
>
> Mr. PERKINS. Yes, sir. (Hearings, p. 1423.)
>
> The CHAIRMAN. Mr. J. Pierpont Morgan was at your right hand when this thing was incubated?
>
> Mr. SCHWAB. Yes.
>
> The CHAIRMAN. He was consulting with you between that formative period, between conception and birth; he was present at the birth and the christening, and after this thing was put on its feet, and while you were with it in its earliest days, you felt that in every hour of peril or crisis the best man to consult on account of his wisdom, his power, and his liberality was J. Pierpont Morgan?
>
> Mr. SCHWAB. That is quite true. (Hearings, p. 1401.)

Between April 10, 1901, and January 20, 1903, the finance committee, which directed and controlled the fiscal operations of this concern, usually met at the offices of J. P. Morgan & Co. (Hearings, pp. 3849–3850.)

One or more members of the firm of J. P. Morgan & Co. were present at 446 out of 475 of the meetings of this committee between April 10, 1901, and June 26, 1911. George W. Perkins presided over more than half of these meetings.

In the 138 meetings of the board of directors between April 9, 1901, and March 31, 1911, one or more, usually three, of the members of the firm of J. P. Morgan & Co. were in attendance, J. P. Morgan frequently appearing in person.

It was no difficult task under the circumstances for J. Pierpont Morgan, Robert Bacon, George W. Perkins, Charles Steele, and others acting as directors of the Steel Corporation, to see that J. Pierpont Morgan, Robert Bacon, George W. Perkins, Charles Steele and others acting as syndicate managers for that concern, should be adequately remunerated for all services rendered, or as stated by the Commissioner of Corporations:

> As syndicate managers for the Steel Corporation, these various interests virtually determined the compensation for their services as underwriters. (J. K. S. Rept., p. 345, pt. 2.)

BOND-CONVERSION SCHEME.

The manipulation of stocks of this concern by persons in control of the financial operations of the United States Steel Corporation and the firm of J. P. Morgan & Co. finally culminated in the "bond-conversion scheme," which seems to have originated in the brain of the chairman of the finance committee, Mr. George W. Perkins.

> The terms of the plan were in substance as follows: An issue of $250,000,000 5 per cent 10-60-year sinking-fund gold bonds was to be authorized. Of this amount $200,000,000 was to be paid for in preferred stock exchangeable at par, the additional $50,000,000 to be sold for cash, also at par. Each holder of preferred stock was to have the right to subscribe for the new bonds to the extent of one-half his holdings of that stock (there being outstanding, roughly, $500,000,000 of preferred stock, or twice the amount of the bond issue proposed). * * *
>
> An important feature of the arrangement, and one which proved productive of intense dissatisfaction, was a provision that the underwriting syndicate should receive a commission of 4 per cent on all bonds issued, whether for cash or in exchange for preferred stock, and, furthermore, regardless of whether such bonds were exchanged by members of the syndicate or by individual stockholders of the corporation. Of this 4 per cent commission, 20 per cent, or one-fifth, was to be retained by J. P. Morgan & Co., syndicate managers. (H. K. S. Rept., pt. 1, pp. 348–349.)

This plan was first proposed in April, 1902, but was delayed by suits instituted by stockholders to prevent its consummation.

Mr. Perkins, in proposing this bond-conversion plan to the directors, states, among other things:

> We thought it would be a desirable plan in a good many ways. *It would give us fifty millions of cash without cost* and *we would be creating a sinking fund for retiring what is considered some of the water in the concern.*

When it is remembered that "the concern" at its organization was already bonded for $303,450,000, more than the actual value of all its properties, and that these second-mortgage bonds were, as John W. Gates says, virtually "a promise to pay," the advantage of exchanging a security which carried an obligation to pay 7 per cent for one which called for 5, was manifest. If the Steel Corporation continued to pay the dividends it had covenanted to meet, its preferred stock would pay 7 per cent, and if it went into the hands of a receiver and its creditors were forced to look to the actual tangible value of its assets, then the bond was worth no more than the stock, as neither was based on anything of intrinsic value which would not have been absorbed by prior liens in the hands of Carnegie and others.

This matter, however, is fully discussed and elucidated by Mr. Perkins in his address to the executive committee on March 4, 1902. Said he:

> I would like to report to your committee a plan we have been talking over in the finance committee and which we are going to submit to the board of directors to-day. When the separate companies were brought together you will remember there were a great many contracts that had recently been made for extension, improvements, and one thing and another that aggregated something over $40,000,000. We finally gathered them together and your committee did splendid work in canceling many of these contracts and finally reduced them to something under $20,000,000. These contracts had to be carried out, and we have gone on with them and paid off a good part of that sum already. Then the purchase of the Rockefeller properties was effected at the time of the consolidation, and we made him notes maturing this year, amounting to something like $10,000,000.
>
> So there is something like $30,000,000 in amount that was not capitalized at the time, and we have been somewhat bothered to know just what to do with it. It was not fair to take it out of the earnings of the several companies, we thought, after they were brought together, and we have given the matter a good deal of thought as to how and what to do with it and not hurt the securities. And it brought about this idea of an attempt to retire part of the preferred stock of the company for second-mortgage bonds and have enough in so doing so we could get out an extra amount of bonds to cover these items. After working at it for two or three months we have this plan in mind:
>
> We think we can take up about 40 per cent of the preferred stock, or $200,000,000, which now costs $14,000,000 a year in dividends at 7 per cent on $200,000,000, and in place of that issue $250,000,000 of second-mortgage 5 per cent bonds. That would call for $12,500,000, and then have $50,000,000 of new money, in addition to saving a million and a half a year—$12,500,000 as against $14,000,000. So we would get $50,000,000 without costing us anything and save a million and a half a year besides.
>
> There is no question that it would be very desirable from the standpoint of the company if we can retire the preferred stock. When we came to look into that we concluded *the only time to do it was when the preferred stock was below par*, as it would then be some inducement with the people to take the bonds. * * *
>
> If they had stock at 95, say, and could turn it into bonds at par, *they might feel that there was something in it.* * * *
>
> And, further, we can only do it when the preferred stock is held in large blocks, so we could get a syndicate of it. We began to look about for the large preferred-stock holders and have been successful after two or three months' work in getting up a good-sized syndicate of large stockholders who would put up their preferred stock and underwrite for the success of the thing, provided the stockholders generally did not take it. The idea of the finance committee was that we would make an offer to all of the preferred-stock holders and say: "Will you exchange 40

per cent of the preferred stock for these second-mortgage bonds?" And if they did not do it, then the syndicate would stand ready to do so to a reasonable extent, and if we did not get the entire 40 per cent—say, for instance, we only got 20 per cent—we would issue 25 per cent of additional bonds for whatever stock we took up; that is, if we took up 20 per cent of the preferred stock, or $100,000,000, we would issue $25,000,000 of bonds in place of $50,000,000.

We thought it would be a desirable plan in a good many ways; it would give us $50,000,000 of cash without cost; it would wipe out these inherited improvements and pay the Rockefeller notes. We have made an arrangement with them to take these bonds in settlement of their obligations, which is a good thing, of course, and leave us an additional sum of money that might be used in reorganizing some of the plants and doing things that we want to have done in Chicago and for the bridge company at Pittsburgh. In this way the money really would earn in two ways, first, in the handling of the products between the mills, saving in management in handling the business, and increasing the efficiency of the mills so as to give a large output and make more money in that way. As to how the stockholders will take it, it seems to us if the preferred stock was reduced about 40 per cent the remaining 60 per cent would be more favorable, and the preferred stock holders might look at it in that way.

We have thought the bonds might be a 50-year bond and convertible into preferred stock within 10 years and redeemable at the convenience of the company after 10 years at 110. Another thing we would accomplish—if we got 40 per cent of the preferred stock in obligations maturing in 50 years, we would be creating a sinking fund for retiring *what is considered some of the water in the concern.*

So far as the common stock is concerned, this is going to help it, because the earning capacity of the $50,000,000 would go toward the common stock. We have worked out a form of bond and are going to submit it to the board. I report this matter now so we may talk over the plan if you desire. We propose to offer the whole thing to the preferred-stock holders and let them vote on it.

Judge Gary. Will you extend the option to all stockholders? You will make an elastic bond so you can, if necessary, issue bonds in place of preferred stock.

Mr. Perkins. No; we think that would be dangerous.

We figured 40 per cent because we believe that $25,000,000 of second-mortgage bonds would be considered very good; whereas if we called $500,000,000 of preferred stock, the universal criticism would be *that the bonds are no better security than the stock.*

And if you pass the dividends on the preferred stock you would not be in the hands of a receiver, and if you passed the interest on the bonds you would be.

Mr. Roberts. Will the common-stock holders be invited to subscribe to these bonds?

Mr. Perkins. No; we thought that we ought not to be allowed to do that, because we have tried to see where the justice was. The preferred-stock holders are entitled to as fair treatment as

> can be given them for giving up their 40 per cent of the stock, and the common ought not to be allowed to take these bonds. Moreover, the common-stock holders have benefited by the earning capacity of the $50,000,000 put into the improvements.
>
> Mr. GARY. I think, offhand, it is a pretty good plan.
>
> Mr. PERKINS. It puts us in a strong financial position and reduces our fixed charges.
>
> Judge GARY. In some way we must raise some extra money. We must finance improvements that have been made and must be made in order to make our different plants symmetrical. We must have more money, and this seems to be a way to get it without increasing our fixed charges. (Hearings, pp. 1490–1494.)

This statement clearly illustrates the method of operation and the motives which actuated those in authority in the corporation.

A tentative arrangement between J. P. Morgan & Co. for the alteration in the form of $250,000,000 of securities is considered for several months in the finance committee, then it is reviewed by the executive committee, members of the firm of J. P. Morgan & Co. serving on and in constant attendance upon the meetings of both committees, and finally referred to the board of 24 directors, J. P. Morgan, Robert Bacon, George W. Perkins, and Charles Steel serving in that body at the time. As a result of these deliberations Morgan & Co. are authorized to form a syndicate for the conversion of these bonds and are to be paid a commission of 4 per cent on all bonds issued, whether for cash or in exchange for preferred stock. Of this 4 per cent commission 20 per cent, or one-fifth, was to be retained by J. P. Morgan & Co., syndicate managers. (H. K. S. Rept., p. 349.)

As observed by Mr. Perkins the only time to make this conversion was "when the preferred stock was below par, as it would then be some inducement to people to take the bonds. If they had stock at 95, say, and could turn it into bonds at par, they might feel that there was something in it." The greater the difference between the preferred stock and the bonds the more there would be of this "something" for those who made the exchange. But this option was practically reserved, not for the "people" mentioned by Mr. Perkins, but "to the bankers for themselves and their associates."

The agreement of April 1, 1902, provided:

> 1. For account and in behalf of the steel company on or before the 1st of July, 1902 (or such later day as may be substituted by mutual agreement of the bankers (J. P. Morgan & Co.), and the board of directors or the finance committee of the steel company), the bankers by public advertisement will offer to every preferred stockholder of the steel company, as recorded on the books of the company on a date to be fixed and to be stated in such offer, severally and ratably, for and during a period of at least 30 days after a date or dates to be stated in such offer or offers, (1) the

> preferential opportunity to subscribe for and to take at par the 10-60-year 5 per cent sinking-fund gold bonds of the steel company, etc. * * *
>
> In case such offer shall be so made, and shall not be accepted by holders of preferred stock to the full extent of $250,000,000 bonds, then, and in such case, if and when, from time to time, on or before the 1st day of October, 1903, the bankers shall so request, the steel company will issue and will deliver to the bankers for themselves and their associates, at par, in exchange for preferred stock and for cash upon the same terms and conditions as those so to be offered to the holders of the preferred stock, any and all of the bonds so offered to holders of preferred stock, and not subscribed for by them; * * *. (MacRae Rept., pt. 3, p. 4328.)

The time for exercising these options by the shareholders and the syndicate, respectively, was afterwards changed, outsiders being barred from the privilege of making the exchange after May 16, 1903, the underwriting syndicate retaining the right until July 1, 1904, that is for 13½ months after this privilege was terminated with respect to the stockholders outside the syndicate. (H. K. S. Rept., p. 350.)

In the event the preferred stockholders should fail to act during the *30 days* of grace allotted them, and in the further event that for any cause there should occur a slump in this preferred stock, then the syndicate alone would have the power of exercising this option to transform the depreciated stocks of the corporation into gold bonds at par and it had over $200,000,000 of this stock upon which to operate, by virtue of this peculiar predicament in which the Steel Corporation had placed this prodigious mass of securities.

And both of these things promptly happened. The stockholders did not avail themselves of the opportunity during the limited time available and then the bottom began to drop out of United States steel preferred stock.

> The preferred stock was selling in April, 1902, when the plan was first announced, at 94; by the time the offer was renewed the price had dropped to about 85. * * *
>
> In October, 1903, the margin between the price of the bonds and the price of the preferred stock was about 12 points. In November it widened out to 15 points, the preferred stock selling below 50, whereas the lowest price for the bonds was 65. This meant that the syndicate, which had the exclusive right to continue the conversion, could, by buying preferred stock in the open market and immediately exchanging it for the new bonds, make a profit of $12 or $15 on every share thus purchased and exchanged. The total amount of the stock purchased by the syndicate appears to have been about 248,000 shares.
>
> Apparently the great bulk of this stock was purchased during the interval when the margin between the price of the bonds and the price of the stock was abnormally wide. Very convincing

> evidence to this effect is furnished by the fact that on October 22, 1903, the United States Steel Corporation, in making application to the New York Stock Exchange to have these bonds listed on the exchange, stated that there had been issued up to that time $133,295,500 of the new bonds, of which amount $130,411,000 had been issued in exchange for preferred stock to be retired (the balance having been sold for cash to the syndicate). As above shown, when the syndicate agreement was terminated by the corporation, the amount of preferred stock exchanged or which could be exchanged was $150,000,000. Therefore, the evidence is very strong that during this interval between October 22, 1903, and November 19, 1903, approximately $20,000,000 worth of preferred stock, or 200,000 shares were purchased in the open market by the syndicate for the exchange. * * *
>
> It is, however, worth noting that the suspicion was very widely entertained in Wall Street at the time that the syndicate was not merely taking advantage of a pronounced decline in the preferred stock but that it had actively assisted in bringing about this decline. The mere fact that there was a special inducement to indulge in such manipulation and that the syndicate would be the sole beneficiary at the expense of the remaining stockholders is alone a very telling criticism of this feature of the plan. (H. K. S. Rept., pt. 2, pp. 350–356.)

The payment of 4 per cent commission to the syndicate did not escape its share of merited censure: "If the substitution of such bonds for stock is regarded as inadvisable, then, says the Commissioner of Corporation, 'the payment of 4 per cent commission becomes open to objection. It amounted on this assumption to the payment by the corporation of $6,800,000 to the syndicate for raising $20,000,000 of cash; in other words, a commission of 34 per cent. Viewed in this light alone, it is impossible to avoid the conclusion that the commission was grossly excessive.' Without attempting to pass on this feature of the plan, it seems clear that the exclusive privilege allowed the syndicate of converting preferred stock into bonds was undesirable and unjustifiable." (Ib., p. 357.)

The whole transaction was in violation of the laws of New Jersey, the State in which the concern was incorporated. The Steel Corporation finding it advisable to do this thing, the law to the contrary notwithstanding, proceeded to have the objectionable statute repealed. (Minutes board directors, United States Steel Corporation, Mar. 4, 1902, Apr. 1, 1902, MacRae's Rept., pp. 3755, 3756.)

It was bitterly assailed in the courts and in the press, and injunction proceedings were threatened against the corporation. (H. K. S., 356.)

At last, under pressure of continued and almost universal censure, Judge Gary, chairman of the executive committee, notified J. P. Morgan & Co. that—

> In view of the interest of yourselves and your associates in the success of the corporation, *we think it not improper to suggest that the continuance of the conversion at the present wide disparity in*

prices may be injurious to the corporation's credit and hurtful to the interests of its stockholders. (Hearings, p. 1582.)

With the completion of the conversion of $150,000,000 of preferred stock, the request was complied with.

For a period of about five years J. P. Morgan & Co. had dominated the directorates of the United States Steel Corporation and its subsidiaries—the Federal Steel, the National Tube, and the American Bridge Cos.—they had assembled their plants, inflated their capitalization, and marketed their bonds, and as a result they had received in cash $9,800,000 and securities after various interchanges and conversions of a par value of $113,326,494; in all, the astounding sum of $123,126,494.

The grand total in cash and securities turned over by the Steel Corporation and its subsidiaries to the Moore, Morgan, and other syndicates for similar services was $160,765,894, or approximately 50 per cent of the actual value of all its plants and properties combined.

These operations, excluding the fees for bond conversion, are epitomized in the following table:

Amount of Steel Corporation's stock issued as a commission to the underwriting syndicate and the amounts so issued in exchange for stocks of constituent concerns issued for the same purposes, excluding in all cases stock issued as a bonus for property or for cash.

Company.[1]	Amount of stock issued to cover promotion charges.	Rates of exchange into United States Steel stock.		Total amount of United States Steel stocks issued in this exchange.	
		Preferred.	Common.	Preferred.	Common.
Federal Steel Co.:					
Preferred	$857,192	110.00	....	$942,911	....
Common	3,599,619	4.00	107.50	143,985	$3,869,590
American Steel & Wire Co., common	11,600,000	....	102.50	....	11,890,000
American Tin Plate Co., common	10,000,000	20.00	125.00	2,000,000	12,500,000
National Steel Co., common	5,000,000	....	125.00	....	6,250,000
American Steel Hoop Co., common	5,000.000	....	100.00	....	5,000,000
National Tube Co., common	20,000,000	8.80	125.00	1,760,008	25,000,000
American Bridge Co., common	7,250,000	....	105.00	....	7,612,500
Total, subsidiary companies	63,306,811	....	....	4,846,904	72,122,090
Add for United States Steel Corporation, after deducting $28,000,000 of each class to cover cash provisions[2]	....	....	....	36,998,700	36,998,800
Grand total securities of United States Steel Corporation representing commissions to promoters and bankers for the corporation and its constituent concerns combined	....	....	....	41,845,604	109,120,890

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[1] In this table nothing is included for the American Sheet Steel Co., owing to the absence of accurate information, although apparently there was a large issue of stock to the promoters of this concern. Again, nothing has been included for the Shelby Steel Tube Co., because of the drastic reduction in capitalization effected in the acquisition of this concern.

[2] The deduction of cash expenditures in arriving at the commission proper of the Steel Corporation is somewhat inconsistent with the method followed in the case of the other companies, where the commissions in stock, as stated, are the gross amounts, out of which the respective syndicates had to meet some expenses. In most cases, however, these expenses are believed to have been small, both actually and relatively, and, moreover, the amounts are not known. The expenditures in the case of the Steel syndicate, however, were definitely stated in the preliminary report of the corporation, and, moreover, were large ($1,200,000 of the expenditures of $3,000,000 appears to have been used to acquire securities of the Carnegie Co.). For these reasons it seemed fairer to make an allowance for these cash expenditures in the case of the Steel Corporation syndicate.

(H. K. S. Rept., pt. 1, p. 251.)

EFFECT OF OVERCAPITALIZATION UPON THE INDUSTRY.

The injury to the stockholders of the Steel Corporation by this prodigal absorption of its securities by those intrusted with the management and direction of its affairs was not to be compared with the greater and more far-reaching detriment to the industry itself as a result of this persistent and pernicious practice of stock manipulation and stock inflation by certain financiers who had secured the complete and absolute mastery of so large a part of this vast business.

They had, at the beginning, secured the consolidation of a great number of steel and iron works, big and little, modern and antiquated, not only with a view to scientific and economical coordination of plants and processes, but to the curtailing of production and fixing prices.

Unrelated units, located here, there, and yonder, good, bad, and indifferent, had been collected under a common ownership, not to so much cheapen or expedite production—in the nature of things that was impossible, since they were often widely scattered, and as a rule were not assembled with any reference to the sequence of processes and stages of manufacture through which an article of iron or steel must pass from the raw material to the finished product—but were constructed and intended for identical operations; that is, hundreds of tin mills were in one company, tube mills in another, wire and nail plants in another, and so on. The operation of such concerns under one ownership could not in the nature of things cheapen production. It could and did afford an effective device for the regulation of that production and the "steadying of the market."

These mines, mills, and furnaces, thrown together in a hurried and haphazard manner, had been capitalized at approximately 300 per cent of their actual value, and weighed and trammeled by this burden of excessive capitalization they were confessedly unable to meet impending competition from one single concern, until recently a limited partnership, which had avoided the evils of the stock exchange and the control of the syndicate.

The superiority of the Carnegie Co. was due to its superior and scientific integration, the technical skill and practical experience of its managers, and to the fact that its securities did not figure on the stock market. (H. K. S. Rept., p. 105.)

It could run if necessary at a narrow margin of profit, without the fear of dividends passed or panics created; no receiver could close its doors or take charge of its operations because of the nonpayment of interest on its bonds.

With the other subsidiaries and former competitors of this company the case was different, the danger point was reached long before any commodity was sold at approximately its mill cost. A failure to pay dividends meant a depression of its stocks and a disturbance of the stock market, and the interests in control had a greater interest in and derived a greater profit from their operations in the stock market than the manufacture of steel.

The manifest and inherent weakness of the whole system should have suggested a policy of retrenchment and reform. The already overburdened subsidiary corporations were immediately saddled with an apparently crushing load of inflated capitalization and recapitalization of these companies by the bankers and brokers in charge of them as is manifest from an inspection of the table following.

Comparison of securities issued by United States Steel Corporation in 1901 with amounts of securities of constituent concerns and cash acquired therefor.

Companies.	Actual value original plants and other assets.	Capitalization.	United States Steel stock issued for each $100 old stock.		Amount United States Steel securities issued in exchange.			
			Preferred.	Common.	Bonds.	Preferred stock.	Common stock.	Total
Carnegie Co.:								
Bonds, etc.	$160,000,000.00	$159,450,000.00			$159,450,000.00			
Stock (all common)		160,000,000.00			144,000,000.00	$98,277,120.00	$90,279,040.00	$492,006,160.00
Federal Steel Co.:								
Preferred stock	32,741,454.70	53,260,200.00	$110.00			58,586,220.00		
Common stock		46,483,700.00	4.00	$107.50		1,859,348.00	49,969,978.00	110,415,546.00
National Tube Co.:								
Preferred stock	19,000,000.00	39,997,400.00	125.00			49,996,750.00		
Common stock		39,937,400.00	8.80	125.00		3,514,491.00	49,921,750.00	103,432,991.00
American Steel & Wire Co. of New Jersey:								
Preferred stock	40,000,000.00	39,998,500.00	117.50			46,998,237.00		
Common stock		49,901,900.00		102.50			51,149,448.00	98,147,685.00
National Steel Co.:								
Preferred stock	26,000,000.00	26,992,200.00	125.00			33,740,250.00		
Common stock		31,969,800.00		125.00			39,962,250.00	73,702,500.00
American Tin Plate Co.:								
Preferred stock	13,825,000.00	18,325,000.00	125.00			22,906,250.00		
Common stock		27,995,000.00	20.00	125.00		5,599,000.00	34,993,750.00	63,499,000.00
American Steel Hoop Co.:								
Preferred stock	11,000,000.00	13,997,500.00	100.00				13,997,500.00	
Common stock		18,995,000.00		100.00			18,995,000.00	32,992,500.00
American Sheet Steel Co.:								
Preferred stock	13,000,000.00	24,497,700.00	100.00			24,497,700.00		
Common stock		24,498,800.00		100.00			24,498,800.00	48,996,500.00
American Bridge Co.:								
Preferred stock	12,670,000.00	31,348,000.00	110.00			34,482,800.00		
Common stock		30,946,400.00		105.00			32,493,720.00	66,976,520.00
Lake Superior Consolidated Iron Mines, common stock	30,000,000.00	29,413,905.00	135.00	135.00		39,708,771.00	39,708,771.00	79,417,542.00
Oliver Iron Mining and Pittsburgh Steamship Cos (one-sixth interest)	421,700.00	421,700.00				9,250,000.00	9,250,000.00	18,500,000.00
Total	358,658,154.70	868,430,105.00			303,450,000.00	443,414,427.00	141,272,517.00	1,188,086,944.00

United States Steel stocks issued to syndicate for $174,000, par value of stocks acquired otherwise than by direct exchange, and for $25,000,000 cash capital and underwriting services	174,000.00 25,000,000.00				64,998,768.00		129,997,605.00
Stock sold to incorporators for cash	3,000.00				1,500.00		3,000.00
Total	883,607,105.00			303,450,000.00	510,205,743.00	508,227,394.00	1,321,883,137.00
Underlying bonds of constituent companies							59,091,657.00
Mortgages and purchase-money obligations of constituent companies							21,872,023.00
Grand total, securities issued and assumed							1,399,051,229.00

Messrs. MacRae and Herbert Knox Smith include the Shelby Steel Tube Co. among the consolidated concerns. This company was not considered at the time of the formation of the Steel Corporation and was not acquired until August, 1901, and for that reason is not included. (See minutes executive committee, Apr. 20, 1901, MacRae Rept., p. 3781; minutes finance committee, Aug. 8, 1901, MacRae Rept., p. 3845.)

It will be seen that properties of less than $400,000,000 in value after being capitalized at over $883,000,000 were arbitrarily burdened with an additional incubus of $500,000,000 more without adding an additional dollar to the intrinsic value of the properties, and $303,450,000 of this amount a bonded indebtedness, bearing interest at 5 per cent, and over $500,000,000 of it preferred stock upon which the corporation covenanted to pay an annual dividend of not less than 7 per cent.

Previously it had been exceedingly difficult for these concerns to overcome the heavy handicap of overcapitalization in a threatened trade war; it was manifestly impossible now. It is true that the great difference in wealth and resources between the Steel Corporation and the older concerns still remaining in the steel business, and the close relations existing between them due to trade agreements, interlocking directorates, and other causes, gave little cause for apprehending an organized effort to cut prices on the part of the Lackawanna, the Cambria, Jones & Laughlin, and other like companies.

If, however, some new association of able and ambitious steel men, similar in purpose and "personnel" to the old Carnegie Co. and possessing the necessary resources and capital, should attempt to undersell this huge and inflated concern, its fate could easily have been determined.

NEW COMPETITION FORESTALLED.

It became therefore the fixed and unalterable policy of the Steel Corporation from its organization to the present time to forestall this dreaded competition.

A steel company producing an output in any degree comparable with that of this corporation would at the outstart demand an immense ore reserve, enough to supply it with raw materials, for a period of 15 or 20 years at least. The Steel Corporation smelts over 20,000,000 tons annually. An effective competitor would necessarily require several hundred million tons of available ore. The control of such ores as are at the present merchantable and available would preclude the formation of any new steel company, no matter what might be the possibility for profit in that business conducted upon a scale comparable with the operations of the United States Steel Corporation.

At the time of the formation of the Steel Corporation the then available ore supply was confined to the Lake Superior region, and a control of the Old Range and Mesabi ores—that is, the mines of Michigan and Minnesota—meant at the time the complete mastery of the situation, so far as the obtaining of a supply of raw materials by any new and formidable competition was concerned. Or as stated by Mr. Schwab on December 21, 1901:

> The steel industry to date has drawn its ores chiefly from what is known as the Lake Superior district in the Northwest. In fact, I believe that I may safely say that from 80 to 90 per cent of all the steel produced in the United States is made from ores in this district. It is *the standard ore* and one steady source of supply. * * * Geologists tell us that the possibilities of future discoveries on new ranges is rather remote. (Hearings, p. 1282.)

To corner and preempt all the ore in this vast region would, of course, effectively forestall future competition from other than then existing steel companies who had previously secured ore reserves in this region.

This, however, was a stupendous task, both on account of the extent of the properties and the character and great resources of their then owners, viz: The Rockefeller and Hill interests.

The Lake Superior Consolidated Iron Mines embraced the properties which were originally possessed by Wetmore and the Merritts. Says Leonidas Merritt:

> I think we had more iron property at the time we turned it over than they did when they turned it into the Steel Corporation. * * * I know they dropped lots of the lands that we had and bought some of them back at a higher price. (Hearings, p. 1915.)

These ore bodies, procured at an outlay of $420,000, were immediately capitalized by the Lake Superior Consolidated Iron Mines at $29,887,448, and when absorbed by the United States Steel Corporation that concern issued $130 of its preferred stock and $130 of its common stock for every share (par value $100) of stock of the original company.

The issuing to Mr. Rockefeller of stock in the Steel Corporation of the par value of over $80,000,000 for his $420,000 bargain can only be explained by the fact that the Rockefeller interests were themselves extensively engaged in the same business as the corporation owning and operating the Troy Steel Products Co. and the Colorado Fuel & Iron Co. and that these ores were absolutely necessary to a monopoly of the supply of raw material in that district. To remove a competitor and to obtain control of this 400,000,000 tons of ore it was necessary to pay the holders their own price, and that was done.

Says the Commissioner of Corporations:

> *It is incredible that there could have been any such rapid increase (nearly 250 per cent) in actual market value in this short interval.* * * * The chief owners of the Lake Superior Consolidated stock were Standard Oil capitalists who were under no pressure to sell, and who must have recognized the strategic position which the ownership of this ore and railroad property gave them,

> and who certainly must have intended to name what they considered a high price. The organizers of the Steel Corporation on their side were naturally willing to pay an extremely liberal price for this extensive property, *particularly in view of the important degree of monopolistic control over ore* transportation which *was thereby secured.* (H. K. S. Rept., pt. 1, p. 30.)

And again:

> Owing to the fact that this company not only had very extensive ore reserves but also an important ore railroad, *and more especially to its exceptionally strong financial backing, it was practically in a position to dictate its own terms and apparently did so.* (Ib., p. 175.)

By the absorption of the Rockefeller interests the Steel Corporation more than doubled its previously extensive ore holdings, and it now became its fixed and avowed policy to acquire *all* the *available* ores in the whole Lake Superior district not previously obtained by other steel concerns. The distinction between an ore from which pig iron can be made and *an available* ore must be kept distinctly in mind in any discussion of the policy of the Steel Corporation.

At this time the richest ores high in metallic content and freest from deleterious substances could be purchased outright for not exceeding 15 cents per ton; the same ores mined and transported about 1,000 miles to lower lake ports were worth $4 or $5 a ton. (Report Rukard Hurg, p. 52.) In other words, the cost of mining and transportation was more than 25 times the original cost of the ore, and it was approximately as expensive to produce and ship a low as a high grade ore. For that reason, ores low in metallic content, no matter what the amount or cost, were not available in competition with the high-grade ores, or, as Judge Gary expresses it, "we can afford to let our competitors get the low-grade ores if we have the better ones." (MacRae Rept., p. 3799.)

An array of figures which fails to draw this distinction is useless and misleading in any effort to determine the extent of this corporation's control of raw materials. Ores no matter what their price or extent, whose low iron content prohibited their being mined and transported in competition with the adjacent high-grade ores, could not and did not effect a monopoly based upon the acquisition of *all available ores.*

This distinction between the available and nonavailable ores depended not only upon the metallic content but upon the presence or absence of such deleterious substances as sulphur and phosphorus, the texture of the substance, and the cheapness and facility with which it could be mined. It is a highly technical question requiring the knowledge and experience of an expert chemist and miner. The vice president of the company, Mr. James Gayley, was detailed to the important task of securing all such ore in the Michigan, Mesabi, and

Vermilion Ranges, Mr. Gayley having been for years in charge of the selection and purchase of ores for the old Carnegie Co., and being especially learned and skilled in their analysis and selection. Backed by the almost illimitable financial resources of the United States Steel Corporation, Mr. Gayley declared that if given a free hand, "he would buy every pound of ore and every piece of ore property he could get in the Northwest." (MacRae Rept., p. 3811.)

The minutes of the Steel Corporation show that its directors were in complete accord with Mr. Gayley in his efforts to secure "every pound of ore and every piece of ore property in the Northwest." It appears that on November 25, 1902, the finance committee (Messrs. Gary, Perkins, Edenborn, and Gayley present) were considering the purchase of the Champion mine on the Marquette Range, Michigan.

"Mr. Gayley states in substance that the property is located close to the property of our Lake Superior Co., near Ishpeming, Mich.; that the ore is a peculiar ore and quite rich; that the property contains a large bed of ore," etc., viz, 2,000,000 tons and 20,000 acres of unexplored land included. Mr. Gayley is especially insistent upon the purchase of this mine, because, to quote the minutes verbatim:

> *Mr. Gayley feels satisfied that the property will be taken up by some Cleveland interests, or perhaps the new Sharon Union Co. in Pittsburgh, and he would much prefer to see it with this corporation rather than with its competitors.* * * *
>
> The chairman (Judge Gary) stated that that kind of ore is scarce and we have use for it, and *that we do not want our competitors to get it.* (Minutes finance committee, Nov. 25, 1902, MacRae Rept., p. 3809.)

At the next meeting of this committee:

> Mr. Gayley *again called attention* of the committee to the desirability of our acquiring the property of the Champion Iron Mining Co., and stated that President Cole has not only studied the maps of the property, but has gone down into the mines, and reports that he is satisfied that the mine ought to produce 4,000,000 tons, and agrees with Mr. Gayley that we ought to get this property. * * *
>
> In answer to Mr. Steele's inquiry as to how Mr. Gayley felt on the subject *of purchases of ore land, Mr. Gayley replied that he would buy every pound of ore property he could get in the Northwest.*
>
> Mr. Converse stated that he would *like to go on record that he was of the same opinion.* Mr. Gayley called attention to the fact that the explorations west of the Mesabi and Vermilion Ranges show no ore. Mr. Perkins *believes we ought to get the property,* but not on the present terms. * * * The chairman (Judge Gary) said that *he thought we ought to take in these properties at a fair price.* (Minutes executive committee, Dec. 2, 1902, MacRae Rept., p. 3810.)
>
> *The property was forthwith acquired.* (Minutes executive committee, Dec. 9, 1903, MacRae Rept., p. 3810.)

A few weeks later these gentlemen met to consider the Kosmerl ore property, Mr. Schwab also being present.

> Mr. Gayley stated that there is now an opportunity to secure an option on the ore property known as the Kosmerl, lying between the Whiteside and the Wanless properties; and it seems to be the deep part of the basin of ore of these three properties; that our people believe the properties will show at least 5,000,000 tons of ore; that the basis of the lease would be 35 cents per ton with a maximum of 50,000 tons the first year, 100,000 tons the second year, and 150,000 tons thereafter; * * * that the ore averages 59 per cent iron. * * *
>
> The chairman stated that a royalty of 35 cents for non-Bessemer ore is a pretty big one.
>
> Mr. Gayley stated he believed it to be a splendid proposition, and that *if we did not take it Mr. Hill will; that he does not think we ought to let it get away from us.*
>
> Mr. Steele (of the firm of J. P. Morgan & Co.). If we can get the ore properties on a fair basis, I think we ought to take them.
>
> On motion duly seconded it was voted that the offer be recommended to the finance committee. (Minutes executive committee, Mar. 24, 1902, MacRae Rept., pp. 3814–3815.)

Mr. Gayley was both an enthusiast and a veteran in this business of getting the ore first, as indicated by the following extract from the minutes of the Carnegie Co.:

> Mr. Gayley. I would like the approval of the board of the purchase of the Rose tract, etc., cost being $100,000. * * * The terms of claimant are cash. If we had not taken the property, it would have been purchased by the Mathers people. *We had to act very quickly to keep them from getting it.* This ore is estimated at anywhere from two to four million tons.
>
> Mr. Clemson. *I approve of the purchase because it is a strategic move. I am certain it is worth the money.* (MacRae Rept., p. 4110.)

Mr. Gayley was as alert and wise in his knowledge of men as of mines. It appears that Corrigan, McKinney & Co. were engaged on a large scale in the purchase and leasing of mines and the sale of ore to independent concerns, and had become involved in some way. The resourceful Mr. Gayley immediately negotiated a loan for the following reason:

> Mr. Gayley. The principal advantage, I think, is that the group of mines will eventually come to us. These people are always getting into financial difficulties and if it had not been that we had stepped into the Queen group of mines they would have gone to the Cleveland Cliffs Co. I think the outlook is, and while it may not prove so, that we will eventually get that group of mines. It puts us in touch with them so that we will get the first call on their other mines. It has been their history that their mines are available for purchase. They have some very excellent mines on the Mesabi Range and are practically in control of the non-Bessemer ore market to-day.
>
> Mr. Lynch. I am perfectly willing to act on the recommendation of Messrs. Clemson and Gayley, but this occurs to me: The

> collateral that they have offered is ample; *why do they*, as business men, come to us for this money *and put themselves in our power?*
>
> Mr. GAYLEY. For the simple reason when they obtained that other loan, and we had to pay a bonus on it, *we suggested to them that in the future, if they needed to borrow money with their mines as collateral, they come to us.* (Board of directors' meeting, Nov. 8, 1900, MacRae Rept., p. 4105.)

In a written statement urging this loan Mr. Gayley states:

> Outside of the Cleveland Cliffs group of mines at Ishpeming, *there is no other* large Old Range group not owned by us, excepting these at Crystal Falls. This amount of money can be easily borrowed on the security offered, and it is advisable that we should loan it, as we may, later on, secure the property at a reasonable figure and avoid paying an extra premium; and, further, *it puts us in harmony with Corrigan, McKinney & Co., who have good properties on other ranges, and who can be very useful to us in many ways.* (MacRae's Rept., p. 4105.)

With the vast holdings of the Carnegie Co. in the Old Ranges and the Lake Superior Consolidated Co.'s still more extensive properties in the Mesabi Range, the corporation had in the beginning the greater part of the iron ores in the Northwest and practically all the best and richest properties, and this intense desire and increasing activity in an effort to obtain "every pound of ore and every piece of ore property" can only be explained upon the theory that such purchases were necessary in order to secure and maintain an absolute monopoly of the raw materials in that region.

Before the executive committee in June, 1901:

> Mr. Gayley stated that we now have about *70 per cent of the known* Old Range ores, including Bessemer and non-Bessemer, and that of the Bessemer Old Range ores we control *about 90 per cent.* (The Bessemer being much the more valuable.)

At that very meeting Judge Gary declared:

> The chairman stated that the standard Old Range ore is very scarce, and it is something we need: * * * The chairman further stated that in making this statement he is assuming that money is scarce and that we ought not to buy any other properties that we can do without at the present time; *he does not think, however, that we should let an opportunity go by* to obtain what can be considered the very highest grade of iron ores whenever and wherever we can buy them at a reasonable price; that we should in some way furnish money to secure ores of *that kind if we are to continue in the ascendancy;* * * * (Minutes executive committee, June 21, 1901, MacRae Rept., pp. 3788–3789.)

This policy of buying ore lands "whenever and wherever we can" seems to have been carried out to the letter. On January 3, 1903:

> Mr. Gayley presented a letter addressed to him by President Cole under date of the 3d instant, concerning an option which the

> Oliver Iron Mining Co. has on the Whiteside Forty, on the Mesabi Range. * * *
>
> Mr. Cole recommends the purchase of this lease on the best possible terms and thinks we could secure it for $100,000 and a royalty of 20 cents per ton. * * * Mr. Gayley stated that the option expires January 15; that it adjoins the property owned by Mr. Hill and contains about 7,000,000 tons; *that he does not know of any block of ore property in the Northwest outside of this and the property of Mr. Hill that they will report; if any new ore is found they are satisfied it will be some isolated spots on the Mesabi Range, of the line of St. Louis and Itasca kinds, and that every 40 has been drilled.* * * *
>
> Upon a motion, duly seconded, it was voted that the purchase of the lease, on the terms stated by the chairman, or better, be recommended to the finance committee. (Minutes executive committee, Jan. 6, 1902, MacRae Rept., p. 3811.)

The New Union-Sharon Co., of Pittsburgh, which had previously engaged in active competition for the purchase of iron ores, was acquired by the Steel Corporation, with its extensive holdings, including the Sharon mines and the Donora Mining Co., with their 40,000,000 tons of ore. (H. K. S. Rept., pt. 1, p. 287.)

Mr. Hill remained at this time the sole rival of the Steel Corporation and the only holder of any large amount of ore which could be rendered available by any new steel industry which might be organized in the future.

The superior quality of the ores owned by the United States Steel Corporation and their vast extent rendered them independent of Mr. Hill so far as securing an ore reserve was concerned. This fact was patent to Judge Gary even before Mr. Gayley had succeeded in acquiring all the available ores which could be obtained outside of the Hill properties and before the absorption of the mines of the Union-Sharon Co. In May, 1902, Mr. Steele favored purchasing the Hill properties. Said he:

> I think we have been a little too considerative in taking lands; some we have refused have doubled in value since. I think we ought to buy Mr. Hill's ores.

To which Judge Gary responded:

> *We certainly have everything on the Vermilion. We bought everything on Mesabi that is good, that is best, that is first class, with perhaps one exception,* which we could not get, and with the exception of beyond Hibbing; we can not get there. Mr. Hill is not there now. The property which has been bought is low-grade ore and we have this class of ore, certainly 60,000,000 to 70,000,000, not yet opened. *We can afford to let our competitors get the low-grade ores if we have the better ones.* (Minutes executive committee, May 6, 1902, MacRae Rept., p. 3799.)

Thomas F. Cole, who knows these properties possibly better than any other living man, states:

> I think the United States Steel Corporation own the cream on the range. They own the very best ore produced on the range.
>
> The CHAIRMAN. How much of it (steel company's holdings) is of the second class?
>
> Mr. COLE. Thirty per cent. (Hearings, p. 5494.)

On May 20 this matter was again under discussion by the finance committee:

> The PRESIDENT (Mr. Schwab). While there I asked our people to go over the matter of our refusals of ore properties presented on short notice *and see if the man around the corner, so to speak, took over whatever we refused,* and I find in most instances he did. *Every ore property we have refused has been taken by others.* The question is, What ought our policy to be in this regard? Most of our people are working very energetically for a new supply of ore, and the fact that we keep searching, then do not take, puts us in a very awkward light. For example, we are showing our interest by looking out for them and then manifesting indifference by turning them down. I think we should stop explorations and wait until they come to us. *Mr. Hill is a serious situation up there, and they are taking these properties and then in turn losing them to our competitors,* and he is using all his efforts to have them take up these properties.
>
> Mr. STEELE. I have a sort of feeling that we are in an atmosphere of high prices all around. I think, however, when hard times come *these little fellows can't carry these ore properties.*
>
> The CHAIRMAN. Have we turned down any first-class properties adjacent to our roads?
>
> The PRESIDENT. *No; when you say first-class propositions.* However, it is pretty hard to say how any property may develop.
>
> The CHAIRMAN. If our competitors have bought property of a low-grade ore where the analysis was not over 50 per cent in iron and high in sulphur, *I think we can afford to let them have them at these high prices.* I told Dering that I thought they made a mistake in their purchase, for the reason that they are tied up to Hill and had a low grade of ore. I don't think that we would be attracted by such a proposition, even if it were on our railroad. *We have at least 60,000,000 tons of that grade of ore, which is not worked at all.* * * * (Executive committee minutes, May 20, 1902, MacRae Rept., p. 3800.)

In approximately two years after its organization the steel corporation had "bought everything on the Mesabi that is good, that is best, that is first class, with perhaps one exception," and their position in the old ranges was still stronger. They had *everything* on the Vermilion and 90 per cent of all "the known old range ores"—that is, all the ranges in Minnesota and Michigan known at that time. "Outside of the Cleveland Cliffs group of mines at Ishpeming, Mich.," says Gayley, "there are no other large old range groups not owned by us, excepting those at Crystal Falls." (MacRae Rept., p. 4105.)

To get "every pound" of that remaining 10 per cent of Bessemer ore on the old ranges, and *all* that was left on the Mesabi, whether it was best or first class or not, became the fixed policy of the corporation, and the present holdings of the concern demonstrate their complete success in securing almost to the last pound and the last piece of ore property, every mine in the Northwest not previously held by other steel companies, and a small amount secured by ore dealers.

In 1901 the corporation estimated its ore holdings at 700,000,000 tons.

> Authoritative data submitted to the Senate Finance Committee *in 1909* by a prominent iron manufacturer *with the steel corporation's consent showed that the corporation itself then reckoned on about 1,625,000,000 tons of Lake ore*, of which 1,258,000,000 tons was of the current commercial standard. * * *
>
> On this basis, therefore, the Steel Corporation would have had *over* 75 per cent of the total commercially available ore in the entire Lake Superior region.
>
> * * * * * * *
>
> In 1907 the holdings of the Steel Corporation in Minnesota, which State includes the Mesabi and Vermilion Ranges, according to a carefully prepared schedule of the Minnesota Tax Commission, amounted to about 913,000,000 tons, or 76 per cent of the total ore deposits for the State. * * * (H. K. S. Rept., pt. 1, p. 58.)

It appears that there was still some part of this remaining 24 per cent which was obtainable by the resourceful and tireless purchasing agents of the corporation, since "a report of the Minnesota Tax Commission for 1908, which, after a very careful listing of the iron-ore mines of the State and an estimate of their tonnage (evidently on a conservative basis), placed the grand total tonnage of the United States Steel Corporation in 1907 in round numbers as follows:

Grand total of all concerns in Minnesota	1,192,000,000
United States Steel Corporation (Oliver Iron Mining Co.)	913,000,000
Per cent Steel Corporation (computed by bureau)	76.6

While this estimate covered the State of Minnesota only, in view of the fact that prior to the recent acquisitions on the Baraboo district of Wisconsin over 80 per cent of the Steel Corporation's reserves, excluding the Hill holdings, were in Minnesota, it will be seen that these figures give a fairly complete idea of the position of the Steel Corporation in this respect."

By 1909 the corporation had made further inroads into the slender supply of ores still remaining in this region. Says Mr. Smith:

> In this connection it may be noted that the secretary of the Minnesota Tax Commission, in a letter to the Commissioner of Corporations, dated *May 12, 1909*, said:
>
> "They (the United States Steel Corporation) now control at least 80 per cent of the present known tonnage in the State." (H. K. S. Rept., pp. 378–379.)

From 80 to 90 per cent of all the steel produced in the United States is made from the ores in this district. Ore must be made into pig iron before it can be converted into steel. The Steel Corporation producing less than one-half the total output of pig iron, has 80 per cent of the raw material, leaving all other concerns to make the other half out of what they can secure the remaining 20 per cent.

To maintain in the face of such a condition that this overmastering control of the ore supply in the Northwest was obtained with an eye single only toward securing an ample supply of raw material is preposterous. Such a position would be absolutely untenable, leaving out of consideration the fact that the Steel Corporation's holdings in the Birmingham district (the only region outside of the Lake Superior district where ore can be mined and smelted at a profit) are enormous and practically double that of all other iron and steel concerns.

	Ores of present standard commercially.	Silicious and other low-grade ores.	Total.
Ores, United States Steel Corporation:	*Gr. tons.*	*Gr. tons.*	*Gr. tons.*
Northern ores	1,258,289,000	365,845,000	1,624,134,000
Southern ores	459,300,000	239,000,000	698,300,000
Total	1,717,589,000	604,845,000	2,322,434,000

(H. K. S. Rept., pt. 1, p. 379.)

After every "forty" on the Mesabi Range had been explored, and Mr. Gayley was satisfied that no new ore would be found outside of "isolated spots" and *he did not know of any other block of ore property in the Northwest outside of the Whiteside forty* and the property of Mr. Hill that they will report (MacRae Rept., p. 3811), it was manifest that by securing this Hill property the tremendous task of securing "every pound of ore and every piece of ore property" upon the market or liable to be discovered would be practically complete.

The Hill properties were the key to the whole situation; without them no control of the ores of the Northwest would be complete. These holdings were enormous.

CHARACTER AND EXTENT OF HILL PROPERTIES.

In 1899 James J. Hill acquired the major portion of these properties from Wright and Davis, lumbermen in that region, together with a railroad connecting with the Great Northern system, for the sum of $4,300,000. (See Hill testimony, hearings, 3151–3246.)

> Mr. Hill, acting for the Great Northern system, continued to pick up parcels of ore property on the Mesabi region until by 1906 he had acquired in all more than 65,000 acres, containing hundreds of millions of tons of ore. (H. K. S. Rept., pt. 1, p. 260.)

Mr. Hill owning or controlling both these ores and the transportation facilities by which they were delivered at the docks on Lake Superior was keenly alive to their strategic importance and prepared to, if advisable, hold them indefinitely, being in a position financially to deal at arms length with Mr. Morgan and the United States Steel Corporation.

As early as 1902 Mr. Schawb, then president of the company, favored making some arrangement with Mr. Hill looking to the control of these properties and Judge Gary expressed fears that he had been "neglected." (MacRae Rept., pp. 3800–3801.)

Mr. Hill, however, did not come to terms until January 2, 1907, when the United States Steel Corporation obtained these extensive holdings estimated to contain from 400,000,000 to 500,000,000 tons of ore.

HILL LEASE.

Under the terms of this lease the corporation agreed to mine and ship via the Great Northern a certain minimum tonnage yearly, increasing from 750,000 tons in 1907 to 8,500,000 tons in 1917, at which it was to remain during the life of the lease, the minimum for each year from 1907 to 1917 increasing as follows:

	Tons.		Tons.
1907	750,000	1913	5,250,000
1908	1,500,000	1914	6,000,000
1909	2,250,000	1915	6,750,000
1910	3,000,000	1916	7,500,000
1911	3,750,000	1917	8,250,000
1912	4,500,000		

Dried ore containing 59 per cent metallic content is taken as a basis on which royalties were computed, and for such ore the corporation agreed to pay $1.65 per ton delivered at the docks at Superior, Wis., the freight rate being 80 cents per ton for ores of this grade, the royalty increasing when the ore exceeded this standard in iron and decreasing when below it in the following ratio:

Iron content.	Combined royalty and transportation (per ton, 1907).	Iron content.	Combined royalty and transportation (per ton, 1907).	Iron content.	Combined royalty and transportation (per ton, 1907).
Per cent.		*Per cent.*		*Per cent.*	
49	$1.1680	55	$1.4572	61	$1.7464
50	1.2162	56	1.5054	62	1.7946
51	1.2644	57	1.5536	63	1.8428
52	1.3126	58	1.6018	64	1.8910
53	1.3608	[1]*59*	[1]*1.6500*	65	1.9392
54	1.4090	60	1.6982	66	1.9874

[1] Base.

Where ores contained less than 49 per cent of iron, the corporation was to pay 1.10 per ton, transportation included.

The royalty on the different grades of ore increases 3.4 per ton each year (4 per cent on 85 cents, the original royalty) during the life of the lease. (See Hill ore lease hearing, pp. 3247–3252.)

The Commissioner of Corporations, as a rule exceedingly guarded and excessively conservative, in criticizing the conduct of the Steel Corporation unhesitatingly expresses the opinion that this most remarkable and extraordinary contract between the Hill interests and the Steel Corporation was made with the manifest intent to secure a monopoly of the ore reserves in the Northwest and of the transportation lines by which iron ores were carried from the Minnesota ranges to Lake Superior:

> This base rate of royalty in the Hill lease was far in excess of the going rates for similar ore at this time, and, taken in connection with the annual increment of 3.4 cents per ton, which was a very extraordinary provision, these royalties were unprecedented. It is true that occasional leases had been made at as high as a dollar per ton, without, however, any annual increment for interest. But such leases were decidedly exceptional, and also applied to comparatively small parcels of ore of superior quality or availability. The royalty rates on new leases for the Steel Corporation during the period from 1907 to 1910 were very much lower, and none of them approached that of the Hill lease. The following tabular statement shows substantially the terms of royalty for all leases of Mesabi Range properties made by the Steel Corporation from 1907 to 1910, inclusive, including renewals of former leases.

Rates of royalty stipulated in leases made by the Steel Corporation (including renewals) of ore properties in the Mesabi Range, 1907–1910.

Mine.	Royalty.
I. Renewals or extensions of prior leases:	
Park Lot	$0.60
Oscar Mitchell lease	.25
II. Leases made, 1907–1910, but under option previous thereto:	
[1]	[2] .35–.60 [3] .20–.45
[1]	.25
[1]	.36
[1]	.50
Mooswa lease	.25
III. Other leases, 1907–1910:	
[1]	.75
[1]	[4] .35–.45
Republic Forty	[5] .35
[1]	.75
[1]	.75
[1]	.25–.35
[1]	.25
Simple average all leases (using means where royalty takes form of a range of price)	.4373

[1] Not designated by name of mine, but by surveying specifications.
[2] Ore over 58 per cent iron and under 0.05 per cent phosphorus, advancing from 1908 to 1928.
[3] Other ore advancing from 1908 to 1928.
[4] 35 cents for first 5 years.
[5] Taken for surface purposes and not considered valuable for ore.

> The average rate of royalty for these Mesabi Range properties during this period was, therefore, about 44 cents per ton.
>
> The Steel Corporation during this period entered into a few new leases or renewals of leases on the old ranges and also in the Baraboo district—less than a dozen in all. Most of the leases of old range properties provided for a sliding-scale royalty, dependent on the price of ore at Cleveland. It is impossible, therefore,

to say what the royalty at any future time will be. Using the highest price for ore at Cleveland thus far reported—$5 per ton—the average royalty in these leases would be under 40 cents per ton. The royalties in the Baraboo leases ranged from only 10 to 20 cents per ton, the ore in this district being of a rather low grade.

Since the Hill properties leased by the Steel Corporation were all on the Mesabi Range, it seems fairer to use the average for that range only for comparison with these recent leases by the corporation, although the average for this region is higher than that for all leases made by the corporation in these years in the entire Lake district. The average rate for all the leases, excluding those in the Baraboo district, as nearly as can be computed from available data, would be less than 40 cents.

It is believed that the average content of the ore covered by the Mesabi leases listed in the foregoing table is not very far from 53 per cent—or 59 per cent when dried—the base grade in the Hill lease. Therefore, it seems entirely fair to compare the average royalties shown by the above table with the royalty for 59 per cent dried ore, as stipulated in the Hill lease. Extensive data gathered by the bureau for the average yield of Lake ores used in blast furnaces from 1902 to 1906, inclusive, covering a larger percentage of the Lake ore sold and used in these years, show an average natural iron content of about 53.9 per cent. By far the greater part of this was Mesabi ore.

It will be seen that in only three of the leases mentioned in the foregoing table, namely, the three leases at a 75-cent royalty, do the royalties approach anywhere near the base royalties of the Hill lease for the year 1907, and when account is taken of the fact that the Hill royalties increase each year, the disparity is all the more marked.

The question, therefore, arises as to why the Steel Corporation entered into this lease under the onerous conditions noted. *The only reasonable explanation which the bureau has found for this unusual transaction is that it was designed to prevent this ore from falling into the hands of competitors of the corporation. Had this ore been sold or leased in small parcels to a large number of independent producers, this might have tended to depress the price of ore as well as to foster competition in the manufacture of iron and steel. On the other hand, if these ore lands were simply held by the Great Northern interests without development, this would leave the opportunity open for the organization of a very important rival to the Steel Corporation. At this time, however, the Steel Corporation was the only concern in the iron and steel business which was in a position to consider the acquisition of these Hill ore lands in a single block. By securing control of these enormous reserves the Steel Corporation obviously strengthened its control of the ore industry and at the same time put obstacles in the way of further competition in the iron and steel industry.*

The Steel Corporation specifically denies that this lease was intended thus to head off competition, and, instead, contends that it was desired merely in order to strengthen the corporation's ore reserves. At the time this lease was entered into, however, the corporation had fully a 30-year supply (and perhaps a

> 50-year supply) of ore under its control. Had this Hill ore been acquired at a bargain price, an obvious reason for its acquisition would be furnished; but in view of the extraordinarily high rate of royalty at which this ore was taken over and the other onerous conditions in the lease, particularly the high minimum tonnage stipulated, the only reasonable explanation, in the opinion of the bureau, is that the corporation chiefly desired to forestall competition. *The high royalty named in this lease, therefore, instead of being proof of a marked appreciation of ore values, is rather an indication of the extent to which the Steel Corporation was ready to go in order to prevent this ore from falling into the hands of rival interests.*
>
> In view of the exceptionally high royalties stipulated in this lease, it is hardly surprising that the Steel Corporation did not claim, in its appraisal of 1907 above discussed, any value for this lease in the schedule of its assets.
>
> Considering the great value which has been claimed for it by some writers upon iron and steel matters, this fact is at least interesting. Obviously, however, a lease at a royalty far above the going rate of royalty for ore of similar character has no transfer value and therefore no equity value which would warrant the corporation in treating it as an asset. Indeed, in view of the extremely high rate of royalty and the high minimum requirements, this lease may perhaps be regarded as an onerous burden rather than an asset.
>
> In this connection, the clause in the lease which permits the Steel Corporation on two years' notice to cancel the lease on January 1, 1915, is perhaps significant. Indeed, there have been rather definite intimations by officials of the corporation that this option may be exercised. (H. K. S. Rept., pp. 321–323.)

Mr. Hill has never before or since sold ores at such a prodigious price, nor has the Steel Corporation at any time from its organization to the present time ever paid such a sum. A comparison of the royalties in Table A, "Old leases," with the rates in Table B—i. e., "Corporations contract"—will show the great difference between the amounts paid by the corporation and others, and this notwithstanding the fact that the mines enumerated in Table A contained the better ores. Nothing has been found in all Mr. Hill's 60,000 acres in any way comparable with the great Mahoning mine, either in the extent or quality of the ores, and it is now mined at a royalty of 12½ to 27½ cents a ton.

TABLE A.—*Shipments and revenue under "old leases."*

Year.	Tons mined.	Average royalty.	Revenue.
		Cents.	
1907	2,902,880	13.9940	$406,229.56
1908	1,294,976	19.1548	248,050.37
1909	2,964,051	14.9664	443,611.21
1910	2,993,893	15.2002	455,078.47
1911	1,758,182	17.3525	305,089.00
Total	11,913,982	....	1,858,058.61

Minimums receivable under "old leases."

Mine.	Annual minimum tons.	Royalty rate.	Minimum royalty.
		Cents.	
Mahoning	300,000	27½–12½	$82,500.00
Stevenson	200,000	20 –12½	40,000.00
Utica	100,000	20 –12½	20,000.00
Leetonia	75,000	36	27,000.00
Sweeney	37,500	25	9,375.00
	712,500	....	178,875.00

Royalty rates under the leases on the Mahoning, Stevenson, and Utica mines are on a sliding scale, according to amount of annual shipments. The Mahoning obtains the minimum rate named on an output in any one year of 1,500,000 tons, the Stevenson and Utica on an output of 500,000 tons, respectively. The interest of "the companies" in the Leetonia and Sweeney mines and in 40 acres in the Stevenson mine is an undivided one-half. The annual minimum tonnages in these mines, as above stated, show the one-half interest of "the companies" only. All of these mines have been opened and are regular shippers except the Sweeney.

TABLE B.—*Operations under Great Western Mining Co. lease.*

Year.	Tons shipped.	Average per cent iron.	Average royalty.[1]	Royalty received, including freight.	Deficiency minimum royalty.		
					Tons.	Rate.	Amount.
1907	137,270	58.7641	$0.838726	$225,020.07	....	....	....
1908	508	65.1498	1.189295	1,005.95	1,499,492	88.4	$1,325,550.97
1909	41,624	56.4001	.792687	32,994.90	2,208,376	91.8	2,027,289.07
1910	2,046,970	56.9633	.853830	2,854,379.52	847,024	95.2	806,366.48
1910	106,007	−49.0000	.300000	110,378.95	....	....	....
1911	5,344,078	58.2148	.945308	[2] 8,591,830.70	....	....	[3] 1,325,550.97
1911	155,681	−49.0000	.300000	155,450.51	....	....	[4] 140,502.05
	7,570,450	57.8769	.917818	11,705,231.04			2,693,153.50
	261,688	−49.0000	.300000	265,829.46			
	7,832,138			11,971,060.50			
Interest earned on unappropriated minimums							156,184.24
Total royalty and freight, as above							11,971,060.50
Grand total receipts from Great Western Mining Co., with interest earnings							14,820,398.24

[1] The schedule price of ore shipped by the Great Western Mining Co., when hauled by the Great Northern Railway Co., includes delivery at Lake Superior, the rail freight being paid by the lessor companies. This freight has been 80 cents per ton, but on Dec. 1, 1911, was reduced to 60 cents per ton. No ore was shipped during the month of December, 1911. For convenience, the royalty rates above shown are net rates—that is, the royalty rate after deduction of freight.

[2] This amount includes, in addition to payments at the regular schedule rates for the required minimum shipments for the year 1911, the entire amount of the 1908 deficiency minimum and a portion of the 1909 deficiency minimum payments, which were absorbed by shipments of the Great Western Mining Co. during 1911, as shown by (3) and (4), together with $154,187.49 interest earned thereon.

[3] 1908 deficiency minimum, absorbed by shipments.

[4] Portion of 1909 deficiency minimum, absorbed by shipments.

(Hearings, pp. 3254–3255.)

It was manifest at the time that the immense sum paid Rockefeller was intended to satisfy or eliminate a potential competition, as well as to secure a reserve of raw material, yet after paying $200 par value in stocks of the Steel Corporation for every dollar expended on the original purchase of these properties, the ore, estimating it at 400,000,000 tons, cost the corporation something less than 20 cents per ton, and putting it on a cash basis estimated at the market value of these stocks at that time, it did not amount to 10 cents per ton.

The Rockefeller mines together with other properties acquired by Mr. Gayley contained "everything on the Messabe that is good, that is best, that is first class, with possibly one exception," and all the Hill holdings were on the Mesabi Range.

The Old Range ores are still more rare and costly, yet Mr. Gayley, in June, 1901, acquired a one-third interest in the Nagaunee mine, thought to contain 5,000,000 tons of ore, for $500,000 cash.

> Mr. Gayley believes this ore is just as good as the celebrated Narril *finest of Old Range.* * * * That it is the best piece of property on the Marquette Range he knows of. (MacRae Rept., p. 3788.)

On December 6, 1902, this concern secured the Champion mine at Marquette, Mich., together with 20,000 acres of unexplored land, at approximately $1,000,000. (MacRae Rept., p. 3809.)

The Whiteside forty containing 7,000,000 tons upon a royalty basis of not exceeding 25 cents per ton. (MacRae Rept., p. 3811.)

On May 12, 1903, the Monroe ore property with its 25,000,000 tons of ore was taken over at 30 cents per ton, together with a traffic contract that made it practically *free* ore to the corporation. (MacRae's Rept., p. 3818.)

The American Steel & Wire Co., as has been stated, purchased the Sauntry mine in 1899, containing from 40,000,000 to 45,000,000 tons, at $700,000 cash. In 1900 the Sharon Steel Co. purchased the fee to the Sharon mine for $150,000 (this mine had 20,000,000 tons of ore). (H. K. S. Rept., p. 208.) In December, 1910 (three years after the Hill lease), the corporation purchased a certain Walker tract, containing 1,400,000 tons, *at 10 cents per ton.* (Minutes finance committee, Dec. 20, 1910, MacRae Rept., p. 3879.)

Some idea of the proportions of this unusual lease may be gained by comparing its royalties with the price at which ores were then and are now selling; wherever ore is found in that region, in "some isolated spot" overlooked by Mr. Gayley.

In this connection the following excerpt from a brief filed against a tonnage tax bill in the House of Representatives of the Minnesota Legislature in 1909 by the delegation from St. Louis County (a large number of the mines of the Mesabi Range being in this county) may be noted:

> The cheapest sales of fee ore we ever knew were for less than 1 cent per ton. The highest that we ever knew were for 15 cents per ton. There may have been sales at a higher price, *but we have never known of one, and upon inquiry can learn of none.*

> This positive and deliberate statement, coming from a delegation of men representing the richest iron-ore mining section of the country, is certainly entitled to much consideration, even though it may not be an exact indication of maximum ore values. Furthermore, *this statement was made in 1909, or eight years after the organization of the Steel Corporation,* during which interval there had been a considerable appreciation in values of ore property. (H. K. S. Rept., pt. 1, p. 208.)

And later still, *in 1912,* Messrs. Cole and Sellwood were before this committee, the former for years in charge of the corporation's ore properties in the Northwest and the latter one of the best informed and most experienced of ore dealers and expert in determining the value of such properties in the opinion of Mr. James J. Hill and the representatives of the Steel Corporation. Neither of these gentlemen, after having their attention called to this statement, could recall a sale of ore where a greater sum than 15 cents per ton had been paid for an absolute title in fee simple for iron ores in that region. Mr. Sellwood further states:

> The CHAIRMAN. Did you not have the question up (in the district courts) as to the value of these iron ores in the ground? * * *
>
> Mr. SELLWOOD. I think I did.
>
> The CHAIRMAN. I will refresh your memory and ask you if you did not place the value of the ore in the ground, before it is stripped or anything of that sort, at from 4 to 5 cents?
>
> Mr. SELLWOOD. I think I did; now that I come to think of it, it was before the court in Duluth?
>
> Mr. GARDNER. What year was that?
>
> Mr. SELLWOOD. I would say that was fully 10 or 12 years ago. It was at the time we changed from the tonnage tax to a real estate valuation. * * *
>
> The CHAIRMAN. What I would like to know is, was that valuation placed upon the Bessemer or non-Bessemer—the 4 or 5 cents?
>
> Mr. SELLWOOD. Well, that was placed on the Bessemer, and the non-Bessemer was less.
>
> Mr. GARDNER. That was the fee value?
>
> Mr. SELLWOOD. Yes, sir.
>
> Mr. GARDNER. Do you know what year that was in?
>
> Mr. SELLWOOD. It was fully 10 or 12 years ago. (Hearings, pp. 5464–5465.)

Mr. P. H. Nelson, who now lives on the Mesabi Range at Hibbing, for 18 years engaged in the purchase and operation of iron mines, and for a good part of that time in the employ of Mr. James J. Hill, himself states:

> Mr. GARDNER. But what is iron ore worth in the ground? Well, we will say an average of 55 or 60 per cent metallic content?
>
> Mr. NELSON. *I think 10 cents a ton for iron ore in the ground is a good price, and I have iron ore myself.*
>
> Mr. GARDNER. That is, high metallic or Mesabi ore?

Mr. NELSON. Fifty-eight per cent, yes. Of course it depends on the mining conditions. If you have property that is easily stripped, and so on, that makes a difference.

Mr. GARDNER. But suppose you had a great quantity of property spread all over the Mesabi Range and elsewhere. You think 10 cents a ton would be a fair valuation for that ore in the ground?

Mr. NELSON. I think so.

Mr. GARDNER. At present, say?

Mr. NELSON. Yes, sir.

Mr. GARDNER. And it ought to have been the case 10 years ago, or do you know? Were you in the business 10 years ago?

Mr. NELSON. I started in about 12 years ago exploring.

Mr. GARDNER. Should you say they are more valuable now than they were 12 years ago?

Mr. NELSON. Oh, yes.

Mr. GARDNER. Therefore 10 cents a ton would have been an excessive valuation?

Mr. NELSON. In the ground, you understand.

Mr. GARDNER. * * * Suppose you found in examining the books of some concern that they had valued their ore in the ground at 50 cents a ton. Would you think that was excessive, in calculating and making that statement of their assets? If you found they valued their ore at 50 cents a ton in the ground, would you consider that excessive?

Mr. NELSON. I would.

Mr. GARDNER. Should you consider 25 cents excessive?

Mr. NELSON. Yes, sir.

Mr. GARDNER. Should you consider 15 cents excessive?

Mr. NELSON. Well, that is getting around——

Mr. GARDNER. To about where you think it ought to be?

Mr. NELSON. Yes. (Hearings, pp. 1945–1946.)

Ordinarily one leasing ore has the benefit of the interest on the deferred payments for the various amounts of ore (minima) taken out each year during the life of the lease, usually about 30 years. And the actual cost of the ore is ascertained by calculating the present worth of these various sums payable usually during the life of the lease. For instance, purchases under a 30-year lease, at a royalty of 25 cents per ton (the usual royalty for Messabe ores) is about equivalent to fee ore at 11 cents per ton. But no such rule can be applied to this extraordinary lease, the ore rising in value each year 3.4 cents. *That is, interest on the royalty was calculated in favor of the lessor at the rate of 4 per cent per annum.* In other words, in 1915 Mr. Hill would have been collecting annually, by virtue of this provision, an amount equivalent to the interest on $140,000,000 invested at 4 per cent, a sum sufficient to have purchased the whole 400,000,000 tons of ore at *35 cents per ton.*

This lease could not be canceled prior to 1915; by its terms the corporation agreed to receive at Superior 750,000 tons in 1907, the tonnage and cost per ton increasing annually until 1917, upon reaching maximum of 8,250,000 tons, at $1.99 per ton, making in all a total of 49,500,000 tons, at an average cost of $1.881 per ton, amounting in all to $92,875,000.

Year.	Tons.	Rate.	Amount.
1907	750,000	1.65	$1,237,500
1908	1,500,000	1.684	2,526,000
1909	2,250,000	1.718	3,865,500
1910	3,000,000	1.752	5,256,000
1911	3,750,000	1.786	6,697,500
1912	4,500,000	1.844	8,190,000
1913	5,250,000	1.854	9,733,500
1914	6,000,000	1.888	11,328,000
1915	6,750,000	1.922	12,973,500
1916	7,500,000	1.956	14,670,000
1917	8,250,000	1.99	16,417,500
	49,500,000	....	92,895,000

At the time this lease was made neither Mr. Hill nor the Steel Corporation had any definite idea of the amount of ore in his holdings. They had no idea whether they were leasing 250,000,000 or 500,000,000 tons. Thomas F. Cole, for years in charge of all the corporation's ore properties, states:

> The Chairman. You spoke of the difference of opinion between various engineers as to the probable amount of ore in the Hill ore properties, running from two hundred and fifty to five hundred million. How did this vast difference of opinion occur where you had a flat body of ore, easily reached by drilling? * * * Had Mr. Hill's engineers made their estimates from actual drills?
>
> Mr. Cole. *Oh, no, indeed. The major portion of those lands was entirely unexplored.*
>
> The Chairman. Unexplored?
>
> Mr. Cole. Yes, sir.
>
> The Chairman. His estimates, then, were made practically upon the drillings in adjacent lands.
>
> Mr. Cole. *Some exploratory work* that had been conducted on their lands and undoubtedly examinations that his men had conducted on other lands.
>
> The Chairman. How much of the entire Hill ore properties were stripped at the time the Steel Corporation acquired them?
>
> Mr. Cole. *Not to exceed 30 acres.* That is, those lands that were turned over to the Steel Corporation. (Hearings, pp. 5498–5499.)
>
> The Chairman. How much of the Hill ores would have to be concentrated of the 250,000,000 tons that is in there?
>
> Mr. Cole. I am utterly unfamiliar with the nature of the ores as shown up by the development work that has been conducted since I left the corporation; but as a rough guess I should say 60 per cent probably will have to be concentrated.
>
> The Chairman. What is the cost of concentration?
>
> Mr. Cole. The cost is very low. I should place it under 10 cents per ton. (Hearings, p. 5504.)

These lands had not even been explored. Hill estimated at his own holdings by the character of the properties adjoining him. The corporation was compelled at its own expense to *find this ore.* After the drills had located it and the overburden of earth was removed 60 per cent of it was so mixed with sand, gravel, and other deleterious or worthless substances that it had to be "concentrated"; that is, the gravel, sand, etc., washed out of it, and the amount of this stuff eliminated by the concentrator usually equaled in bulk the ore that was left when the process was completed.

The Steel Corporation constructed a "concentrator" at a cost of about $1,500,218. The following letter received from Mr. Filbert, auditor of the Steel Corporation, details the other items of expense incident to the mining of this ore as follows:

> For the year 1907 the average cost of stripping per yard of overburden removed was 33.1 cents. The cost per ton of ore uncovered necessarily varies materially on different properties according to the depth of the stripping removed and the tonnage of ore thus uncovered. No data has been recorded showing the ore tonnage uncovered by the 1907 stripping. From general knowledge of the subject, however, it is estimated that the stripping cost in that year was equal to about 14 cents per ton of ore.
>
> To December 31, 1911, there had been expended for stripping as above $4,406,478.21. To the same date there had been uncovered ore tonnage of approximately 37,865,000 tons. (Hearings, p. 5285.)

This leaves 11,635,000 tons net to be stripped, taking the "base" 59 per cent as the average, or an additional expenditure of $11,635,000, making a total for stripping alone of $6,035,378.21, to say nothing of the cost of exploration and drilling.

This vast project of exploring and developing an area of over 29,000 acres, only *30 acres* of which had ever been "stripped," was undertaken at a time when this corporation had, at an expenditure of multiplied millions and the performance of an engineering feat second in magnitude on this continent only to the digging of the Panama Canal, removed the earth and rock from a depth of from 50 to 150 feet from the cream of the Mesabi Range, exposing ore over areas which can be adequately expressed not in terms of cubic yards or feet, but in acres and square miles. And into these "open pits" were extended the tracks of the Great Northern, the Duluth & Iron Range, and the Duluth, Missabe & Northern Railroads. The only additional expense incident to the mining of these ores was the transferring of the loose gravel-like substances by a steam shovel from the mine to an adjacent car, five or six scoops of these huge machines filling a 50-ton car, and handling the material at the rate of a thousand tons an hour at a cost of not exceeding 10 or 15 cents per ton.

These mines were stripped almost without exception before the Hill lease was made; but the heavy minima, 8,500,000 tons contained in the inexorable contract, forced the corporation to leave these developed mines and to go upon a costly exploring expedition in search of the 200,000,000 or 500,000,000 tons of ore, no man knew, which were buried somewhere in this 30,000 acres of wilderness.

The real disparity between the cost to the corporation of the Hill ores and their own can only be accurately determined by comparing the actual cost of a ton of each delivered on the docks at Duluth or Superior.

This year [1912] the corporation will pay $1.84 per ton for 4,500,000 tons of ore (59 per cent iron), with the additional expense of not less than 10 cents per ton for concentrating 60 per cent, say 5 cents per ton, leaving out of consideration the extra cost for exploration, drilling, and stripping, or $1.89.

Now, the Steel Corporation owns its own roads, and it costs this concern, by its own admission, not exceeding 45 cents per ton to ship this ore. In fact, it costs a great deal less; but for the purposes of illustration the estimate of Mr. Gayley as to the cost of transportation will be taken in this instance rather than our own.

On May 12, 1903, the executive committee were considering the purchase of the Monoe mine, which involved the cancellation of a traffic contract with the Great Northern Railroad and the shipping of the ore over the corporation's rails. Mr. Gayley said:

> The securing of the property, therefore, on this basis would not cost more than on the present basis, *and we will be sure of the traffic contract on the ore, which will net us 35 cents per ton.* In other words, by securing the traffic contract we secure the ore in this property free of royalty, *the profit on the traffic contract more than compensating for the royalty.* (Minutes executive committee, May 2, 1903, MacRae Rept., p. 3818.)

Estimating the cost of mining to be the same in both instances, and the royalty on the ore in the corporation's mines at the usual rate, 25 cents per ton (much more than the actual cost to the Steel Corporation), ore delivered from its own mines at Duluth involved an actual outlay of not exceeding 70 cents, less the cost of stripping and mining.

Under the Hill lease the cost of the same ore delivered at the same point (a lake port) was $1.89 (less cost of mining and stripping), making the actual cost to the corporation of this ore $1.19 per ton at the present time.

No such sum would ever have been paid for the purpose of securing as an ore reserve only "every pound of ore and every piece of ore property" in the Northwest.

It must be remembered that these Hill properties involved more than a mere reserve for future new and competing steel companies. They were an actual *menace.*

This the corporation knew, and so did Mr. Hill. Astute as Mr. Gary, with a breadth of vision equal perhaps to Morgan's, the "empire builder" saw at an early date the possibility of this new and unexampled iron range, as did Rockefeller, and while the latter was assimilating the Merritt's holdings, he secured a region only less extensive from the lumbermen, Wright and Davis, at a little greater expense.

Hill was more than an owner of iron ores. He was essentially a *shipper,* to such an extent that at one time the corporation hoped to secure these ores simply by giving all the traffic contracts for their shipment to the Great Northern lines. Mr. Schwab, then president of the Steel Corporation, stating—

> The PRESIDENT. I believe we must make some arrangement with Hill * * *. I think Mr. Hill ought to give us the leases of all his properties, *subject to a contract with him by which we would guarantee him a certain minimum of traffic over his road. All he wanted was the traffic. He does not want any royalty.*
>
> The CHAIRMAN. I think *you* will have to pay a small royalty. (Minutes executive committee, May 20, 1902, MacRae's Rept., p. 3801.)

These ores *in the ground* were worth about 10 or 15 cents a ton; on the cars of the Great Northern Railroad they paid the excessive rate of 80 cents per ton for a haul of about 100 miles, and one engine could pull from 105 to 120 50-ton cars down the gradual incline from the range to Superior, netting the Hill roads four or five hundred per cent of the value of the unmined ore.

Hill could *sell and deliver* ore, and to realize on his extensive investment and valuable ore, railroad, and dock properties he must sell and deliver. The old steel companies under the now firmly established policy of integration had secured ore reserves many years ahead. It was probable that Hill, failing to find a market, *would make one.*

The millions spent in "organizing," "consolidating," and "syndicating" the steel industry were imperiled so long as this immense reserve of ore and the superb means for transporting it remained in the hands of James J. Hill. Should he find some new Carnegie with his "young partners," the overcapitalized corporation would find itself once again face to face with that ever-dreaded industrial "force" of which Mr. Temple speaks—"destructive competition."

With the Hill ores under its control, even by complying with the hard conditions of Mr. Hill's inexorable demand, "destructive competition" was at last eliminated, and the Corporation could feel assured that practically "every pound of ore and every piece of ore property in the Northwest" was out of the market so far as any new rival in the steel business was concerned. It paid the inconceivable price, and secured the absolute and long-coveted monopoly for which it had unceasingly labored for over five years. That this deal put the steel industry on a new basis, revolutionizing conditions so far as competition from other than existing companies was concerned is universally and unequivocally admitted by men familiar with existing conditions, and especially by those best qualified to judge them.

Mr. Schwab discusses both the cause and the effect of this vital and basic change at some length in the following colloquy:

> The CHAIRMAN. That was one of the things which made Mr. Andrew Carnegie persona non grata with the older steel concerns, was it not—that he would sell and keep his mills running?
>
> Mr. SCHWAB. That is true; and I want to say that the policy of the Carnegie Co. for many years was to have nothing to do with any agreements of that sort, but the conditions were somewhat different. We had a position to win in the steel trade then. There were older companies than the Carnegie Co. and longer established, like the Pennsylvania Steel, Federal Steel, Lackawanna Steel, Cambria Steel, and Jones & Laughlin. Those were all older concerns. The policy of the Carnegie Co. was to demonstrate its position and to win a position for itself. And it is my belief if Mr. Carnegie were in business now with his plant established, and his position established, and with the possibility that there is not likely to be any more great steel plants any more than there is likely to be any other great trunk-line railroad, that there will be development and extension of the present businesses, it is my opinion his policy would have been somewhat different, and that he would not have made the great sacrifice in prices he then made. * * *
>
> The CHAIRMAN. Now, Mr. Schwab, you say that these concerns we have with us, like the United States Steel Corporation, the Cambria, and the Pennsylvania, and the rest of them, will abide with us, but there will be no new concerns in the field?
>
> Mr. SCHWAB. I do not believe there will be any great development in iron and steel by new companies, but rather development by the companies now in business.
>
> The CHAIRMAN. Now explain that to us.
>
> Mr. SCHWAB. For the reason that the possibility of a new company getting a sufficiently large supply of raw materials would make it exceedingly difficult, if not impossible.
>
> The CHAIRMAN. In other words, a great concern like the Lackawanna or the Cambria or the United States Steel Corporation must own vast ore reserves in order to justify the expenditure of an enormous amount of capital?
>
> Mr. SCHWAB. Quite so.
>
> The CHAIRMAN. And those ores which are now on this continent are owned or leased by the existing operating companies?
>
> Mr. SCHWAB. Not all, but the great part of them.
>
> The CHAIRMAN. There is not a sufficient quantity outstanding to justify anyone else going in the business?
>
> Mr. SCHWAB. I do not think it is possible to-day, with the known ores, for anyone to get a sufficiently large reserve to

> justify the very great expenditure of capital necessary to successly manufacture. (Hearings, pp. 1289–1291.)

Before the Ways and Means Committee, on December 15, 1908, Mr. Schwab stated:

> Mr. CRUMPACKER. The Mesabi deposits are almost owned entirely now by the large manufacturers?
>
> Mr. SCHWAB. They are.
>
> Mr. CRUMPACKER. The small independent manufacturer has to buy his pig iron or his ore from competitors?
>
> Mr. SCHWAB. That is true.
>
> Mr. CRUMPACKER. The Mesabi deposits are the chief source of iron ore for northern producers?
>
> Mr. SCHWAB. Not the Mesabi alone, but the Northwest.
>
> Mr. CRUMPACKER. Lake Superior?
>
> Mr. SCHWAB. The Lake Superior district is the chief source of supply. (Tariff hearings, 1908–9, pt. 2, p. 1673.)

Judge Gary, before the Ways and Means Committee, evidently hesitated to admit and yet could not deny that the corporation held at least an "ultimate" monopoly of raw materials:

> Mr. COCKRAN. Now, among the conditions that contribute to that situation, an important element is your ownership and control of the ore supply?
>
> Mr. GARY. Yes; of course it is.
>
> Mr. COCKRAN. You practically do control the ore supply of the country?
>
> Mr. GARY. No; not now. Not for the immediate future.
>
> Mr. COCKRAN. Well, the ultimate supply?
>
> Mr. GARY. Yes; I think so—that is, pretty nearly. It is not absolute control. (Hearings, Ways and Means Committee, 1908–9, Dec. 18, 1908, pt. 2, p. 1752.)

Mr. Carnegie, out of the business, and void of bias or interest, is more emphatic in his statement of a condition with which he is perfectly familiar and of which he is thoroughly qualified to speak:

> Mr. CARNEGIE. My view, Mr. Chairman, in regard to steel is that an element has come in which does not affect any other industry of which I have knowledge. Gentlemen, you can not organize new steel companies in this country now. Mark that.
>
> The CHAIRMAN. Why not?
>
> Mr. CARNEGIE. Because they could not buy ore.
>
> The CHAIRMAN. They could not buy ore?
>
> Mr. CARNEGIE. They could not buy ore at a price——
>
> The CHAIRMAN. Are there not millions of tons of ore in Tennessee and West Virginia and Pennsylvania which no great concern has yet preempted and that are available at a small cost? I have heard that.
>
> Mr. CARNEGIE. If no man has ever thought that he could buy these ores and go into the manufacture successfully, that is very significant. There have been hundreds of men in search of such a treasure. Do not run away with the idea that the ores of Tennessee can well compete with the ores they are getting from Lake Superior.

> The CHAIRMAN. Why not?
>
> Mr. CARNEGIE. Because the elements are not there. The ores are not the same. The expenses are higher. They are in the wrong place for manufacturing. The consumer is not near there. Believe me, the search for ore in this country has been very, very keen for many years. * * *
>
> The CHAIRMAN. * * * Mr. Schwab claims that all of these ores, and Mr. Perrin and the rest of them say the same thing, are now held by the companies in operation, and that there is no more of it in the market available. Is that true?
>
> Mr. REED. Mr. Schwab did not testify to that. Mr. Perrin did and Mr. Moore and Mr.——
>
> The CHAIRMAN. Mr. Schwab said, if I remember correctly, that there would be no more new great iron concerns, because there was no ore available.
>
> Mr. CARNEGIE. Yes; he did. Schwab is an authority on that. I think Schwab's statement is correct.
>
> Mr. Chairman, you would be amazed at the price it would bring if there were new fields of ore discovered to-day. The end of the Lake Superior region is not far away, and what we are going to do I do not know. If there would be some further discoveries, possibly that would help the situation.
>
> The CHAIRMAN. Are there ores in the Lake Superior region now in sufficient quantities that could be secured and smelted at such a cost, by independents, as to make them available for the purpose of utilizing those ores as the basis of new competing concerns with the existing concerns?
>
> Mr. CARNEGIE. The best evidence of that is that there has been no attempt of any competing concerns for many, many years. (Hearings, pp. 2490–2491, 2492.)

The momentous statement of Mr. Carnegie that "an element has come into the steel industry which does not effect any other"—i. e., its absolute ownership and control of the sole supply of its raw material—should command the most earnest and serious attention of legislators.

No monopoly can be absolutely secure or for any length of time inordinately oppressive which is dependent upon another industry for its subsistence, which it does not control or can not successfully exploit. It, in the nature of things, must meet resistance from two directions continually, from the producer of its raw materials on the one hand and the consumer of its finished product on the other.

The American Tobacco Co., while destroying its competitors and controlling the price of its products to consumers, was in many instances successfully resisted by the organized and determined action of the planters who produced its raw materials.

Cattle growers by the cooperative establishment of abattoirs and the encouragement of the local butcher can to a degree escape the exactions of the great packing houses.

Every monopoly formed by the consolidation and control of any number of mills or shops and factories is to a greater or less degree dependent upon economy and efficiency in the operation of its plants, the skill of its workmen, and the excellence or cheapness of its product. Too inordinate a charge, too wanton an oppression, or too incapable a management of its business may encourage others to invade the preempted industry, and to contend for the lucrative profits enjoyed by a badly managed business.

But no amount of capital, no economy, no industry, no inventive genius can create the raw material, can reproduce an ore deposit. Intrenched in such an ownership, it becomes as impregnable as the metallic ranges upon which it rests. All rivalry, all opportunity to enter the business, thus secure in its exclusive control of a natural resource, which can neither be purchased by the expenditure of capital nor created by labor, is forever precluded. Such a monopoly, while reducing the wage of the laborer and enhancing the cost of the consumer, may contemplate with unconcern the inflation of its securities, and the inefficiency of its plants, or wastefulness and incompetence in the conduct of its affairs. The prosperity or the power of the Steel Corporation is not determined, however, by the extent of its control of any single branch of the industry.

This company was designed to comprehend within one corporate ownership every phase and every department of the industry, and to control every process and every agency incident to its operation. The acquiring of the ore reserves of the Northwest was but a single one of a long and coordinated series of carefully prepared plans by which the corporation proposed to dominate this business, in all its vast and varied ramifications, throughout the whole domain of mining, manufacture, transportation, and sale of its product.

CONTROL OF PIG IRON.

The molten metal is either converted immediately into steel or conveyed into sand molds and cooled. In this, its first and crudest stage, the metal is called pig iron.

All forms of iron and steel are made by the subsequent manufacture of this pig metal. It is the basis of the industry, and by an almost universal custom, the price of pig iron determines the value of steel in many of its finished and semifinished stages. To regulate the price of pig iron was in a great measure to control the industry, and to manipulate that price was to exploit it.

As has been shown, the old and established concerns had acquired extensive ore holdings prior to the formation of the corporation and could not be affected by its activities on the ranges of the Northwest. Almost without exception, the so-called ore dealers were furnace men, selling pig iron rather than ore.

Pig iron was produced in a limited amount in the South and the Steel Corporation until 1907 had failed to secure large holdings in that region.

When it is remembered that semifinished steel, billets and bars, plates, and the like, are usually sold for future delivery and the price is determined by the value of pig iron at that time, the full significance of any manipulation of the market in this commodity is apparent.[1]

An extract from a contract between the Carnegie and the Pittsburgh Steel Cos. will fully illustrate the way in which the price of billets sold for future delivery were automatically determined by the price of pig iron:

> The price f. o. b. cars buyers' works, Monessen, Pa., and Glassport, Pa., contemplated under this contract for Bessemer and open-hearth steel billets 4 inches square and under shall be fixed for each three months' period beginning with the third quarter July 1, 1905, and shall be determined according to the table given hereafter from the average selling price f. o. b. Pittsburgh of standard Bessemer pig iron for the next preceding three months. The average market price of standard Bessemer pig iron shall be agreed upon within one week from the end of each month, and the average price for the three months, within one week from the end of the third month.

When the average price of pig iron is—	The amount to be added to the price of pig iron to determine the price of billets shall be—
$10.99 and under	$5.00
$11.00 to $11.99	5.25
$12.00 to $12.99	5.50
$13.00 to $13.99	5.75
$14.00 to $14.99	6.00
$15.00 to $15.99	6.25
$16.00 to $16.99	6.50
$17.00 to $17.99	(1)

(1) At the same ratio until the price of billets 4 inches square and under to the buyers shall be $24 per gross ton, but in no event shall the price to the buyers for billets 4 inches square exceed $24 per gross ton at any time during the life of this contract.

> (Hearings, p. 4378.)

The control of the pig-iron market was in effect a mighty lever by which the price of semifinished steel through the whole industry could be raised or lowered at will.

The officials of the Steel Corporation determined to secure this coveted and imperial power by a method startling in its naked simplicity whenever the exigencies of the occasion demanded it. *They bought all* the pig iron on the market.

> "We have bought," says Mr. Dinkey, president of the Carnegie Steel Co., "22,000 tons of pig iron for April delivery at $15.50, 22,000 tons from the association, 9,000 from Rogers, Brown & Co., and the remainder from Cherry Valley. *That is all the iron on the market.* (Minutes Carnegie Steel Co. board directors, Apr. 5, 1905, MacRae Rept., p. 4074.)

Mr. Corey, ex-president United States Steel Corporation, describes another one of these big transactions.

> There is understood to be about 65,000 tons in the market for third-quarter delivery and if we buy at this time, *it will be largely for the purpose of preventing the furnace people from offering it around and thus demoralizing the market.* The price would be around $18, valley.
>
> After discussion it was agreed that the iron for the third quarter should be purchased *on assurances from the furnace people that 65,000 tons was all the available iron for that quarter and that no more should be put on the market.* (Minutes Carnegie Steel Co. directors, May 11, 1903, MacRae Rept., p. 4065.)

Sometimes the job was a little too big even for the corporation; then it called in some of its powerful neighbors, who were manufacturers of semifinished steel and would therefore share in the profits of the "corner."

> Mr. DICKSON. We have another option (a rather indefinite option, good for several days at least), all the surplus iron of the Valley Association for the third quarter, amounting to about 55,000 tons, at $19 Valley. We also have an option from W. P. Snyder on 30,000 tons, same period, same price. I think if we should insist on $18.50 Valley both would agree to it; *but of course we want to pay them as much as the finished material will stand.* I talked with Mr. Willis King, of Jones & Laughlin, this morning and he thinks $18.50 Valley *would be sufficiently high to maintain finished material.* He says they expect to be purchasers to the extent of 10,000 tons during the fall. * * *
>
> Mr. COREY. *Are you sure they will take up all the available iron?*
>
> Mr. DICKSON. As sure as we ever are. * * * However, they have agreed to guarantee the price against themselves. I understand the matter will be discussed *in the committee at New York to-morrow.* (Minutes board directors Carnegie Steel Co., May 18, 1903, MacRae Rept., p. 4065.)

Mr. Schwab explains in some detail just why it is advisable to keep the price just as "*high as the finished material will stand.*"

> The president (Mr. Schwab) stated that he would like to obtain the views of the committee (Messrs. Gary, Perkins, Converse, Edenborn, Reed, and Gary) in regard to the advisability of the purchase of 30,000 tons of pig iron at $18.50 for the third quarter of 1903, and for which we would exchange coke at the rate of $3 per ton; that we will require about 100,000 tons in that quarter; that he believes we ought to always be buyers of some pig iron; *that it would be better to even shut down some of our high-priced furnaces and be purchasers; that the price of our finished steel products being regulated by the price of pig iron, we ought not to be endeavoring to get the cheapest iron; that we ought to maintain the price by little purchases; that $1 a ton is such a little thing compared with the advantages we receive in the finished products;* that if we had purchased pig iron there would not have been the present downward tendency in it.

> Mr. GAYLEY. * * * I think we ought to hold the price of pig iron at $18.50, and that it is important for us to stay in the market and buy at $18.50 rather than miss the deal. (Executive committee minutes, May 5, 1903, MacRae Rept., p. 3817.)

Some of Mr. Schwab's "little purchases" are recorded in the minutes of the committee on finance, of which Mr. George W. Perkins was then chairman.

> Question of purchase by subsidiary companies, 2,500 to 5,000 tons of pig iron, was referred to the president with power.
>
> Purchase by the subsidiary companies of 2,550,000 tons of pig iron referred to chairman and president with power. (Extract Finance Committee minutes Feb. 24, 1910, and Feb. 24, 1911, MacRae Rept., pp. 3875, 3912.)

The minutes of the corporation tell in few words the immediate and effective result of buying pig iron in quantities varying from 2,000 to 2,000,000 tons. On February 1, 1905, this brief entry is found on the minutes of the board of directors of the Carnegie Steel Co.

> It was the unanimous conclusion of the board *that the price should be $13.75 per gross ton.* (MacRae Rept., p. 4056.)

And it was:

On September 24, 1901—

> Pig-iron price *fixed* $14.50.

On November 10, 1901—

> Pig-iron price fixed at $15 a ton. (MacRae Rept., p. 4056.)

While buying pig iron in million-ton lots, if necessary, in order that they might not only control but "*fix*" the price to the cent, the corporation did not overlook the meanest dealer in the metal or the most remote avenue by which it might reach the market.

"Scrap iron" can be used as a substitute for pig iron in open-hearth steel furnaces, and the collector of broken or discarded machinery and the humble broker crying "rags and old iron" in the street at one time utilized this débris from the factory and the kitchen, and through this means worn-out rails, broken implements, old kettles, pots, and stoves again found their way into the channels of commerce.

The utilization of this waste material conserved the ore supply and added in an humble but material way to the small savings of the artisan and the housewife.

The utilization of scrap iron in this way was summarily stopped by the corporation, using in this case as a weapon for the quick destruction of the dealer in "old iron" an inordinate control of transportation rates on its own and other roads.

The story is briefly told in the records of the United States Steel Corporation's Traffic Association:

> Mr. BENTLY. The question of revision of scrap-iron rates in the Central Freight Association was up at a meeting last week in

> Chicago and referred to a special committee. Our position has been *that our meanest competition has been from the scrap-iron consumers; and if we can get those low rates up, we will take some advantage for ourselves.* (Minutes Traffic Association, Apr. 21, 1909, MacRae Rept., p. 3988.)

It appears that the corporation had no trouble in inducing the railroads of the country to put the rates on scrap iron "up." In this instance it seems that a Mr. Bihler was enabled to report in exactly 30 days that the rates on scrap iron had been duly adjusted to meet the convenience and serve the purposes of the Steel Corporation.

On the 21st of May Mr. Bihler advised his employers that:

> The Central Freight Association *special committee* held a conference on May 12 with the *traffic representatives* of the various iron and steel producing concerns in Pittsburgh Valley, Wheeling and Chicago districts to consider the requests of a number of independents for the establishment of pig-iron rates on scrap. A detailed analysis of the situation showed that from a *corporation standpoint* where a ton of new steel, either for new light-steel rails or new angles or light channels or shapes was displaced by a ton of the same kind of material rolled from scrap rails the corporation would lose the profit on the ore, the steamship company on the transportation, limestone, coke, as well as the profit in conversion of the raw material into steel, and the carriers would lose the revenue on the ore, coke, and limestone. While each individual subsidiary company receives more or less scrap at their open-hearth plants, on which outside transportation charges are paid, yet the gain this way is more than *offset by having to meet the competition of rerollers for light rails and light shapes.* The corporation's views were stated to the railroad people; the Jones & Laughlin Steel Co. *were of the same view as the corporation interests.* The other independents argue that the scrap for remelting in open hearth furnaces should be entitled to pig-iron rates, because of the price, *etc.; but it is stated that they did not make out a sufficiently strong case, and their petition for the application of pig-iron rates will not be granted.* (Minutes Traffic Association, May 21, 1909, MacRae Rept., p. 3990.)

The argument here is certainly, as stated, from "*a corporation standpoint*" *only.* The arbitrary raising of the rates upon scrap iron from Pittsburgh to Chicago, the resultant *waste* of millions of tons of material which up to this time was and would have been utilized, in order that those in charge of the Steel Corporation might "take some advantage to ourselves" displays a lamentable lack of that breadth of vision which would ordinarily be attributed to those in charge of so colossal a concern as the United States Steel Corporation. A question affecting so closely the industrial operations and domestic economy of the whole country demands consideration, from great corporations and common carriers especially, from some other angle than an immediate and in this case a mean and unfair advantage for a single corporation.

COST TO STEEL CORPORATION OF MANIPULATING PIG IRON MARKET.

This power to write upon its minutes and ledgers "*pig iron price fixed at $15.50 a ton*" was purchased at an immense cost in money and by the total abandonment of any claims to consistency in the reiterated boast that the Steel Corporation, by virtue of its illimitable resources and immense financial strength, could render the whole industry "symmetrical," make it an "integrated," a "rounded out," proposition, and by so doing cheapen production, and in cheapening production lessen the cost to the ultimate consumer, thus making the whole community sharers in its prosperity and its profits.

Upon this theme Judge Gary, Mr. George W. Perkins, and others, both before this committee and on divers and sundry other occasions, have dilated continually and at great length. In its successful efforts to absolutely "fix" the price of pig metal, arbitrarily and at any time, this corporation has abandoned all the advantages incident to integration in order to secure the profits of combination, but which have no force or effect in the actual conduct of its operations.

Now all steel is originally pig metal, but all pig iron is not converted into steel. The total production of pig iron in 1910 was 27,303,567 tons (hearings, p. 5555), the production of steel ingots and castings (from which all finished steel is made) was 25,917,281 tons (H. K. S. Rept., pt. 1, p. 363), leaving an excess of 1,386,286 tons of pig iron to be put to other uses.

In addition to that it requires 1.1 tons of pig metal to make 1 ton of steel. (Tariff Hearings, 1908–9, vol. 2, p. 1635.)

Now, the veriest tyro in the business would see at a glance that a concern immeasurably rich in its mineral reserve and admittedly in a class by itself, in the ownership of transportation facilities, both by land and water, to convey that ore to its blast furnaces, many of them located almost in the midst of the finest coking-coal in the country, would of course produce more pig iron than steel; that is, if it made any valid claim to being "symmetrical" or "rounded out" or "integrated," or was making sincere endeavor to secure those economic advantages incident to "the linking up of productive processes through acquisition under one control of raw materials and manufacturing plants (and in some cases transportation facilities) and through extensions and coordination of manufacturing processes."

The coordinate operation of the blast and the steel furnace is the most perfect and striking example of the economy of integration; there is a saving of a dollar a ton in the use of molten pig metal from an adjacent furnace over cold pig iron from a distant one.

Yet, in order that it might continue to be a purchaser of pig iron, as suggested by its first president, Mr. Schwab, and by that means fix the price of pig iron, this corporation in 1910, with a pig-iron capacity of 16,240,700 tons (H. K. S. Rept., p. 269), shut down its furnaces or refused to start them and actually produced only 11,831,398 tons (H. K. S. Rept., p. 370) of pig iron, and what is more surprising, it pursues this policy notwithstanding the fact that in 1910 it forced it to procure from sources other than its own blast furnaces 2,582,768.1 tons of pig iron. Its ingot production for that year exceeded its pig-iron production by 2,347,971 tons, and it requires 1.1 tons of pig iron to produce a ton of steel ingots (H. K. S. Rept., pt. 1, p. 370).[1]

Since its organization this company has procured from other sources than its own blast furnaces on a market which was deliberately "bulled" over 19,831,582.1 tons of pig iron.

As will be demonstrated in another part of this report, the cost of assembling the raw materials (ore, coke, and limestone) at a furnace in Pittsburgh, for example, is approximately $3 less to the corporation than to its competitors, as a result of the former's control of transportation facilities, estimating no other element of profit to the corporation than that due to this ownership of carriers and power over freight rates, and assuming the furnaces at Pittsbugrh to be representative of a like advantage elsewhere, then this corporation was forced to forego a profit on pig iron which it could easily have produced in the last 10 years in the prodigious sum of $59,494,746.30 in order to "fix" the price of pig iron "ad libitum."

This is not the only element of waste involved in this transaction.

A Bessemer converter is emptied every few minutes, an open-hearth furnace every few hours; either can be started or stopped at short intervals without great loss. The same is true of rolling mills. But these huge and costly structures (blast furnaces), great towers often nearly a hundred feet in height and erected at a cost of exceeding a

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[1] The last year has been taken for the purpose of illustrating the fixed policy of the corporation. It differs in no material respect from others since the formation of this company, as will be seen from the following condensed statement:

Comparison of pig-iron production of Steel Corporation with its crude-steel production, 1901–1910.

Year	Production of pig iron, spiegel, etc.	Production of ingots and castings.	Excess of crude steel over pig-iron production.
	Tons.	*Tons.*	*Tons.*
1901	6,855,731	8,854,820	1,999,089
1902	7,975,530	9,743,918	1,768,388
1903	7,279,241	9,167,960	1,888,719
1904	7,369,421	8,406,378	1,036,957
1905	10,172,148	11,995,239	1,823,091
1906	11,267,377	13,511,149	2,243,772
1907	10,819,968	13,099,548	2,279,580
1908	6,934,408	7,838,713	904,305
1909	11,618,350	13,355,189	1,736,839
1910	11,831,398	14,179,369	2,347,971
Total	92,123,572	110,152,283	18,028,711

million each, stuffed with their big "burden" of tens of thousands of tons of ore, coke, and limestone, and emitting, at intervals of every three or four hours, a sputtering stream of molten metal, five hundred to a thousand tons a day, must *go all the time or not at all*, day and night, during the week and on the Sabbath, the blast furnace must be kept in operation. To start or to stop it is an expensive operation, and the most technically learned in the steel industry can find no more inexcusable instance of extravagance, so far as the actual economy of production is concerned, than in the deliberate closing of a blast furnace, and the substitution of cold pig iron for the hot metal from adjacent steel works. No man is better qualified to speak with authority on this subject than Julian Kennedy, having been for 20 years engaged in the construction and operation of blast furnaces, and no man has less interest or bias, for or against the Steel Corporation, as is manifest from his testimony before this committee.

> The CHAIRMAN. Did you design or construct any of the blast furnaces now owned and operated by the United States Steel Corporation?
>
> Mr. KENNEDY. Yes. Some at Braddock, the Edgar Thompson Works, some at Donara, some of the Ohio Works at Youngstown. I have also consulted and advised on many other plants which now belong to the Steel Corporation, in connection with the construction * * *.
>
> The CHAIRMAN. Have you ever constructed a blast furnace in India or China?
>
> Mr. KENNEDY. In India, but not in China.
>
> The CHAIRMAN. In Russia?
>
> Mr. KENNEDY. Yes. * * *
>
> The CHAIRMAN. I called your attention this morning to the fact that the pig-iron capacity of the Steel Corporation was 16,000,000 tons, and that its pig-iron production was 11,000,000 tons; that its steel-ingot production exceeded its pig-iron production by, say, approximately 2,000,000 tons. * * * Now, is it economy to close blast furnaces, where they can run and you can utilize their output, and open up again—run them intermittently?
>
> Mr. KENNEDY. It would not be economy to close them for a short time and start them up often. It is easy to shut them down if you want to stop for a month or two, and then start up again.
>
> The CHAIRMAN. Why should a blast furnace to be run economically be run regularly? Explain that to the committee.
>
> Mr. KENNEDY. It would not be good policy to shut down a blast furnace once a week, because it always disorganizes it and puts it out of condition, and it takes two or three days to get it straightened around again. But I take it that would be different if you wanted to stop for a month and then start up again.
>
> The CHAIRMAN. I believe that is the reason given for running blast furnaces on Sunday?
>
> Mr. KENNEDY. Yes.

The Chairman. That it is a metallurgical necessity to keep running them after they are started.

Mr. Kennedy. Yes.

The Chairman. The continued shutting down and opening up and starting the blast furnaces is an expensive operation?

Mr. Kennedy. If you stop blast furnaces often and start them up again they do not work very well for the next 24 hours.

The Chairman. I find this statement by Mr. Gary. He states: "It would be better to even shut down some of our high-priced furnaces and be purchasers; that the price of our finished steel products being regulated by the price of pig iron, we ought not to be endeavoring to get the cheapest iron; that we ought to maintain the price by little purchases; that $1 a ton is such a little thing compared with the advantages we receive in the finished products; that if we had purchased pig iron there would not have been the present downward tendency in it."

Now, as a practical steel man, I will ask you to tell me what advantage it is to the Steel Corporation to pay a dollar more for pig iron than the market price and to so conduct their business as to have it raised a dollar a ton.

Mr. Kennedy. Well, steel companies often sell semifinished materials, such as billets, based on Iron Age quotations for pig metal. Of course, if the price of pig metal becomes demoralized it would lower the price of their billets, and it might be good policy to try and steady that price and prevent it from dropping.

The Chairman. That is, prices of the finished steel products or semifinished products sold for future delivery are not sold at a fixed arbitrary price, but upon a sliding scale based upon the price of pig iron at the time of delivery of the consignment.

Mr. Kennedy. In some cases billets are sold for a year ahead. If one company should sell for another company, their requirements for billets for finishing steel a year ahead is often predicated upon the price of pig iron from month to month, taken from the Iron Age.

Mr. Bartlett. The market for manufacturing pig iron is liable to go down, and to steady the market you buy for the purpose of keeping it up—that would be like the man on the race track or in the stock market hedging his bet.

Mr. Kennedy. Possibly, somewhat, on general principles.

The Chairman. As I understand you, the purchase is made for, say, a year ahead, and the price is fixed at the time of delivery.

Mr. Kennedy. Yes.

The Chairman. If they can, by buying or selling pig iron, regulate the price, they can in that way fix the price of this material?

Mr. Kennedy. Yes; if they can prevent a slump in the price of pig iron they will prevent a slump in the price of billets.

The Chairman. Do you know of any other reason why the Steel Corporation should purchase pig iron, if it had the capacity to produce it in the blast furnaces, except to regulate the price?

Mr. Kennedy. Not unless they could buy some cheaper than some of their furnaces could make it. (Hearings, pp. 5073, 5124–5126.)

EFFECT OF MANIPULATION OF PRICE OF SEMIFINISHED STEEL UPON COMPETITORS.

The corporation was quick to perceive the infinite possibilities for exploiting a market it absolutely controlled, and the results of some of its operations are recounted by the sales agents of this concern, Mr. Bope, general sales manager, thus describes the effect of a "made market" on the purchasers of steel billets:

> Mr. BOPE. The average price of pig iron for November was $22.81, covering sales of about 36,000 tons, *which is enough to make a market. This will have the effect of advancing the price on our raw material contracts over the third-quarter price nearly $3 per ton.* It will make the majority of our billet contracts, crucible, for instance, pretty nearly $29 per ton, and *Oliver will pay $30. When you consider that the price of finished material to-day is only $3 to $4 per ton above this figure,* and considerable finished material is sold on old contracts at a much lower price than that of to-day, *how these people can pay this price for their raw material is a pretty hard problem.* I can not but feel the price of pig iron is too high, yet it is legitimate because the demand is here. (Minutes, board directors Carnegie Steel Co., Dec. 3, 1906, MacRae Rept., p. 4079.)

The far-reaching effect of this manipulation of a "sliding scale" upon consumers of this "raw material" is not measured by the one-fourth of 1,096,727 tons of blooms billets, slabs, sheet and tin plate bars, sold by the corporation to outside concerns (see Annual Report United States Steel Corporation 1906, p. 18), but by its blighting effect upon the steel industry in all its subsequent stages. From $3 to $4 per ton was added to the price of all semifinished steel, and in that year the production of rolled iron and steel products amounted to 19,588,468 tons.

The corporation by this increasing of the price of its product between the dates of purchase and delivery appropriated to itself profits out of all proportion to the capital expended on the labor performed. The rewards of the industry free from this interference would have been distributed equitably along the whole sequence of process incident to the manufacture from the ore to the finished product. Under this régime and by a single speculation in pig iron the Steel Corporation added to the gains previously obtained by the production of pig iron an unearned increment greater than the entire profits yet to be distributed in all the subsequent stages of manufacture through which blooms and billets and bars must pass in the hands of the small or so-called independent operator who had not sufficient capital to operate costly blast furnaces and hold still more costly ore reserves.

For the small manufacturer to pay the price "fixed" by his more powerful competitor was indeed "a pretty hard problem." Hard as it was, the corporation determined to make it still harder, and following up the advantage already obtained, prepared to control not only the *price*, but the *supply*.

The control of *both* would put the independent producer absolutely at its mercy.

The rich rewards of the business could thus be continued in the production of steel in its cruder forms, to be distributed among the few immensely rich holders of ore reserves and operators of blast furnaces and steel converters, who as will be seen hereafter maintained an excellent understanding among themselves, and a modicum of the profit remaining could be doled out to the "little fellows" forced to purchase their bars and billets in a market forever "cornered" by this all-powerful consolidation. If they were inclined to be tractable and obey the now "golden rule" proclaimed by Judge Gary and accept without question the gospel of "cooperation and price regulation" as "suggested" at his dinners, and their modest business was not especially coveted by their big competitor, they were not disturbed, but in the event they displayed any disposition to compete, or they possessed some valuable and coveted patent or process, the supply even at an inordinate price was summarily cut off, and the objectionable competitor unless sustained by exceptionable natural advantages or great financial strength or credit went to the wall.

The whole industrial field was roughly divided into three parts.

(1) Old and established concerns sustained by immense reserves of ore and coal, or especially formidable by reason of their financial backing or the close relations between their directors and operators and the officers of the corporation.

With these it formed close alliances by means of pooling agreements, through its subsidiaries preferential contracts, interlocking directorates and other similar devices, or purchased their plants at an inordinate price.

(2) "Good customers" who were not in actual competition with any of the subsidiary companies of the corporation, or who did not cut prices or fail to "cooperate."

These were furnished their due quota of raw material.

(3) Smaller competing concerns, dependent upon the great "primary" companies for raw material, who did compete with the subsidiary companies of the corporation.

These were to be absorbed or went out of business.

SALE OF SEMIFINISHED STEEL TO COMPETITORS.

It was at one time the purpose of the corporation to refuse to sell to all competitors of its finishing mills, who had hitherto depended on the National, Federal, and Carnegie Steel Cos. for raw materials. And since the corporation at this time produced over 65 per cent of the total output of steel ingots and castings, and the greater part of it had hitherto been marketed in a semifinished state by these companies, this sudden shutting off of supplies was calculated to produce profound disturbance in the steel business, and in the event the few old and established concerns having the plants and the ore reserves necessary to the production of large quantities of crude steel "cooperated with the United States Steel Corporation" in this policy, or were unable to meet the sudden and increased demand in either event, it meant the inevitable ruin of the companies thus summarily cut off from their base of supplies.

That such a plan was discussed and approved by the presidents of the subsidiary companies and indorsed by the president of the corporation and that it was deliberately designed to produce "more shutdowns in the future than in the past" is indisputably established by the corporation's own records.

On July 1, 1902, Mr. Corey, then president of the Carnegie Steel Co., stated:

> Mr. COREY. The only item of interest I have to-day is to state that at the last meeting of the presidents it was decided by a majority, *and approved by the president of the Steel Corporation*, that Carnegie and National Steel Co. are not to sell unfinished material on scale contracts *to any companies competing with constituent companies of the corporation;* and such scale contracts with such competing parties are to be discontinued at as early a date as possible. Any excess tonnage we may have over and above amounts required to keep the constituent companies in operation we will sell as we find it necessary, *but at such a figure as will be above that at which we sell the constituent companies. That will mean more shutdowns in the future than in the past.* (Minutes board of directors Carnegie Steel Co., July, 1902, MacRae Rept., p. 4059.)

On April 5, 1904, the finance committee made the following recommendation:

> George W. Perkins in chair.
>
> Recommended that subsidiary companies who are manufacturing semifinished products do not sell same to outsiders in competition with subsidiary companies who are manufacturing finished products from such semifinished products without the consent of the subsidiary company interested (Minutes finance committee, Apr. 5, 1904, MacRae Rept., p. 3857.)

This plan for the elimination of competitors seems to have been in part abandoned and a more scientific and elaborate device substituted, by which such a material could be sold at a maximum price, "all the traffic would bear" especially to "good customers," but the margin between the cost of the raw material and the selling price of the finished product was so adjusted as to make the existence of these concerns who were permitted to buy "on probation" exceedingly precarious.

> Referring to the change of policy decided on by the corporation, *that we* are not in future to *sell any raw material than that which we can not use in our own finishing mills,* the chairman stated that, so far as the Carnegie Steel Co. is concerned, they can not at the present get out of the market because of some long-term contracts, but they are limiting their sales of billets and sheet bars. * * *
>
> There was a full discussion of the matter, each member expressing his views, and while it was the consensus of opinion that the ideal condition would be to use all the steel produced in their own finishing mills, it was the feeling that the production should always be at the point *where certain good customers who are entirely dependent upon us for their steel supply, and who are not in competition with any of the finishing lines manufactured by the corporation, should always be taken care of.*
>
> Replying to this view of the matter, the chairman stated that *in cases like the kind* mentioned it is the intention to supply them as far as possible without limiting our own mills, but he referred generally to making sales among the regular trade. (General sales managers minutes, Apr. 21, 1906, MacRae Rept., pp. 3951-3952.)

At times the officers of the corporation hesitated where there was a semblance of competition to "take care of" a "good customer," who bought all his raw material from them. It appears that the corporation had calculated just a little too closely on the margin of profit at which a certain firm—the Dillworth Porter Co.—could buy billets from the corporation and make them into "bolts and tie plates," and Mr. Schwab brought this "troublesome" question before the executive committee of the Steel Corporation.

> Present: Gary (chairman), Schwab, Perkins, Steele, Roberts, Converse, Edenborn, Reed.
>
> PURCHASE OF PLANT OF DILLWORTH-PORTER CO.
>
> Mr. Schwab stated that he wished to lay before the committee a question that had been a troublesome one in relation to a firm in Pittsburgh, known as the Dillworth-Porter Co. This company manufactures spikes, bolts, and tie-plates in competition with our works in Chicago and other works. That there are only two firms, ourselves and the Dillworth-Porter Co. who make any considerable quantity of this material. That in the past we have been selling these spikes and bolts with the rails. That usually contracts with the railroad companies are made this way. We have been turning over the spikes and bolts to the Dillworth-Porter Co. because they purchase all their steel from the United States Steel Corporation. That a condition has arisen which makes it impossible for the Dillworth-Porter Co. to run their works except at a loss with billets we are furnishing them at the present price, and that we must either furnish them steel at

> some price to enable them to run their works or they will be compelled to contract for the steel elsewhere or make it themselves. That Mr. Dillworth had recently called on him and stated that one of two things must be done—either a sliding-scale arrangement must be made with the Dillworth-Porter Co. by which the United States Steel Corporation will sell them steel dependent upon the price the Dillworth-Porter Co. receives for their materials, or they must provide themselves from other sources. This firm has been taking 65,000 tons of steel from us the past three years and we have made over $1,000,000 profit from their contracts. Mr. Schwab submitted the question whether it would be desirable to make an offer or consider an offer for the purchase of these works, and the committee was unanimous in conclusion against the purchase. (Minutes executive committee, MacRae Rept., p. 3797.)

This is the only recorded instance where the inability of competitors to purchase raw materials and sell the finished product at the measure of profit predetermined by the corporation ever seems to have "troubled" anybody connected with this concern, though it often caused surprise and occasionally considerable satisfaction, as indicated by the following entry on the minutes of the board of directors, Carnegie Steel Co.:

> There is nothing much new in the market except the extraordinary competition for axles. Some of the prices made are simply astounding, especially *considering the fact that our competitors have to buy their billets at a figure that does not permit of more than $2 per ton for conversion.* (MacRae Rept., p. 4073.)

There was "a little competition" on forgings, but that did not puzzle Mr. Bope quite so much since the makers of forgings did not manage to do quite so well between the upper and nether millstone of high-priced billets and low-priced finished material.

> "Then," said Mr. Bope, "on forgings, the mills which are in this business *are holding up the price of billets and pulling down the price of finished forgings, which is practically putting the independent forge makers out of the market.* And on shafting, Jones & Laughlin are selling at a price which their competitors can not afford to meet *after paying the market price of $1.40 for bars.* This is the condition now almost right through the whole market. *There is a little competition,* too, by peculiar arrangements which are being made." (Minutes directors Carnegie Steel Co., Feb. 8, 1909; MacRae Rept., p. 4088.)

The disaster which followed this corner of raw materials, the eager, futile search for high-priced supplies, and the inevitable crash which followed the failure to secure billets and merchant bars, and the like anywhere or at any price, is told by the men who looked with indifference upon the increasing discomfort of their competitors.

> Mr. Bope. We have served notice on a lot of contracts expiring January 1, that we will not renew them. As a matter of fact we need hardly sell a pound of raw steel now to out-

> siders. At Duquesne, for instance, the new lined mill is now taking 65 tons of steel per day, and before long we will be taking 100 tons per day, and as every bit of this is taken from the trade, the situation is growing worse all the time. *There is, of course, an element of strength in the fact that other people are being crowded for steel, and while they can not get it it will make the situation that much stronger until somebody gets in with an entirely new plant.* Somebody will have to prepare to take care of these people we are turning down, and it means a new steel plant somewhere. (Minutes Carnegie Steel Co. board of directors, July 16, 1906, MacRae Rept., p. 4079.)

And again:

> Reporting on the raw-material situation, Mr. Bope stated it is worse to-day than he has ever seen it before, *and he did not know where it is going to end.* A number of their customers are practically shut down now for want of steel, and some of them have gone into the market trying to buy tonnage, but have not so far been very successful. (Minutes general manager of sales, May 20, 1907, MacRae Rept., p. 3955.)

Still the general manager of sales, Mr. Bope, was not content. There still remained a few concerns which managed to do business under existing conditions, although "shaky" or in the hands of receivers, he records the cause of his "worry" over the matter in the minutes of the Carnegie Steel Co. on November 9, 1908, as follows:

> Mr. BOPE. * * * What worries us more than anything else in the situation is the growth of competition. For instance, I was told this morning that Milliken Bros. are going right ahead on two blast furnaces and billet and bar mills. They are figuring on using * * * ore and eastern limestone, but will, of course, have to figure on getting their coke out of this region somewhere. These people have located on Staten Island, and this will mean formidable competition in the export business at least. They are still in the hands of receivers, but I understand are ready to be taken out. (MacRae Rept., p. 4086.)

Milliken Bros., the constructors of the Singer tower and other like structures in New York, were at one time formidable competitors, but under existing conditions Mr. Bope's fears were groundless. Milliken Bros. do not appear to have gotten out, due to the fact, as he (Bope) tells us, that "raw materials have gone so high that people who have to buy heavily are simply down and out."

> Mr. BOPE. There are some things in the situation which are going to have an effect upon the raw end. Milliken Bros have gone into the hands of a receiver and shut down their rolling mills. For the present at least it is the intention to operate only their structural plant, and they are now in the market to buy the tonnage required to fill their contracts, amounting to 45,000 tons, to be placed and taken out within the next six or eight months, besides any additional steel they will need on new contracts the receivers may make. This is tonnage which they had figured on

> making themselves but which will now come into the market. It may not come to *us, but in any event it means that much capacity shut down.* (MacRae Rept., pp. 4080–4081, 4086.)

At last the work was done, *all new competition was eliminated* except Bethlehem, and the Steel Corporation has as yet not shown any disposition to put Mr. Schwab's company "out of business." Mr. Bope hurriedly reviews the steel companies which have been put down and out—thrown into the hands of a receiver or "reported not in a very good shape financially"—finding no "pessimistic feeling anywhere," and characterizing "our position" as "on the whole difficult."

COMPETITION ELIMINATED.

> Mr. Bope. I can not find any *pessimistic feeling anywhere.* Take our own situation, as I reported it to the president on Saturday. On open-hearth billets we will have an accumulated deficit for the next 6 months of 40,000 tons per month, in addition to what we are back as of the 1st of this month. This situation has been changed by the Milliken Bros. and Basic shutting down their rolling mills; they will hereafter be purchasers instead of manufacturers. Milliken Bros. will have something like 25,000 to 50,000 tons of steel to buy to complete their contracts with the new work which the receivers will undoubtedly figure on.
>
> *The Eastern Steel Co., it is reported, is not in very good shape financially,* and it is possible they will also shut down. *This will eliminate all of our new competition outside of Bethlehem and will make our proposition, on the whole, difficult.* (Minutes board of directors Carnegie Steel Co., July 1, 1907, MacRae Rept., p. 4081.)

The power to make and manipulate the price of semifinished steel was vigilantly guarded and favored purchasers of such material were compelled to agree in advance not to resell any part of the material so obtained without putting it through some subsequent process of manufacture.

In its contracts for billets, with the Crucible Steel Co., April 30, 1904, and the Pittsburgh Steel Co., June 28, 1905, it is specifically provided that "It is made a condition of this contract that the buyers shall not resell any of the material furnished hereunder without having first put the same through a process of manufacture at their works." (MacRae Rept., pp. 3661, 4399.)

ABSORPTION OF COMPETING CONCERNS.

Shelby Tube Co.—The multifarious uses to which the control of raw material could be put is illustrated in the negotiations which preceded the absorption of the Shelby Tube Co.

The possibilities of this concern seem to have attracted the attention of Mr. Schwab shortly after the organization of the Steel Corporation.

> Upon the question of the acquisition of the property of that company, the president (Mr. Schwab) stated that the stock outstanding amounted to $8,000,000 of common and $5,000,000 preferred stock. He also gave figures showing the business transacted by the Shelby Co. He is impressed with its earning capacity, and believes that under our control it would net about 50 per cent. He rather thinks that the whole property could be purchased for about $3,000,000. Mr. Converse stated that it is the only real live competitor the National Tube Co. has, and that between the two companies all the patents for seamless tubing manufacture are owned. (MacRae Rept., p. 3784.)

Why a company capitalized at $13,000,000, whose earning capacity impressed a veteran in the steel business like Mr. Schwab to such an extent that be believed it could be made to net 50 per cent could at the same time be purchased for $3,000,000, would at first appear inexplicable. The president of the Steel Corporation, however, knew whereof he spoke.

> The president stated that the Carnegie Steel Co. had a contract with the Shelby Tube Co. to supply it with steel, that it was very favorable to the Carnegie Co., inasmuch as the latter could so arrange the price of steel that it would be rather difficult for the Shelby Co. to continue in business.
>
> The chairman expressed the opinion that he would a great deal rather have that company in business under our control than to absorb them. (MacRae Rept., p. 3780.)

Notwithstanding the fact that this company was the sole competitor of the Steel Corporation in the making of seamless tubes and was the sole owner of the only effective patent for their manufacture, it was absorbed by the corporation by an exchange of securities, 1 share of the preferred stock of the corporation being exchanged for 2⅔ shares of the tube company and 1 share of the corporation's common stock for 4 shares of the common stock of the tube company.

That the control of prices was the governing motive in this transaction is evidenced by the character of negotiations which preceded it.

> It was suggested that some arrangement could be made with Mr. Miller (of the Shelby Co.) with the view of maintaining prices, and that some prices now could be advanced by both companies. (Minutes executive committee, Apr. 24, 1901, MacRae Rept., p. 3782.)

UNION STEEL COMPANY.

Among the sharp competitors of the Steel Corporation for ores upon the Mesabi Range was the Union Steel Co.

> Among other influential interests back of the concern was H. C. Frick. Mr. Frick at this time was also a director in the United States Steel Corporation.
>
> *Merger of Union and Sharon concerns.*—The strong backing of the Union Steel Co., together with its extensive operations, made it an important competitor of the United States Steel Corpora-

> tion. Its operations assumed still greater significance when, toward the end of November, 1902, announcement was made of the merger of the company and the Sharon Steel Co., under the name of the Union Steel Co., to be capitalized at about $50,000,000, thus forming the largest consolidation in the steel industry proper which had been effected since the organization of the United States Steel Corporation itself. The two concerns, together, had at this time a pig-iron capacity of about 750,000 tons yearly, and an ingot capacity of about 850,000 tons—as against a capacity for the Steel Corporation at this time of about 10,000,000 tons—while they had greatly increased their outputs of finished products. (See Table 29, p. 269.) With this announcement were coupled intimations that plans were already projected for the construction of still further important works, as well as the acquisition of one or two other concerns then engaged in the manufacture of rods, wire products, sheets, and pipe. Moreover, there were rumors that the new concern might construct a railroad of its own from Lake Erie to the Connellsville coke region, with connections to the company's manufacturing plants. The impression was very general in steel circles that the consolidated company would assume a position of rapidly increasing importance in the industry. (H. K. S. Rept., pt. 2, p. 254.)

The aggressive attitude of this company and the capacity and long experience in the business of Mr. Frick and others associated with him, caused the Steel Corporation grave concern. The methods which had either destroyed or rendered tractable smaller companies could not be rendered effective in any effort to eliminate the Union-Sharon Steel Co.

On November 4, 1902, Mr. Corey declared:

> I am strongly in favor of pushing the Union Steel Co. as hard as we can. There is nothing we can do to smooth matters over with them, as they are determined to do all they can against us. (MacRae Rept., p. 3640.)

It soon became manifest, however, that this company would not "push." Located in the midst of the corporation's great plants, it was in a position to render any competition especially troublesome in the event it was determined by those in charge to increase the sphere of its activities by competition rather than cooperation.

There remained but one solution—to pay such price as those in charge might demand for an agreement not to further disturb the industrial conditions which the Steel Corporation sought to establish or compete with them for the business. The corporation determined to pay, and instead of the usual exchange of securities the corporation agreed to underwrite the bonds of this company. But the company had no bonds to underwrite, and its capitalization was entirely out of proportion to the immense sum demanded for its properties.

The inflation of its securities just prior to its absorption is another instance of the great difference in the amount actually necessary to operate a large steel plant and the huge sums at which the same concerns are often capitalized when taken under the control of a syndicate. In the minutes of the board of directors of the Union Steel Co. the whole transaction is epitomized in a few brief entries, as follows:

> "*Resolved,* That a stockholders' meeting be had to increase the indebtedness of the company from *nothing* to *$45,000,000.*"
>
> Stockholders' meeting.
>
> Action of board of directors in accepting proposition of T. Mellon & Sons for sale of capital stocks of certain companies, lands, etc., approved.
>
> Capital stock increased from $1,000,000 to $20,000,000.
>
> Authorized increase of indebtedness to $45,000,000. (MacRae Rept., p. 4225.)

In December, 1902, this company was absorbed by the Steel Corporation. It was agreed among other things that—

> Ninth. Upon the organization of Union, as herein provided, the vendors agree to sell and transfer unto the steel company, and the steel company agrees to buy all of said $20,000,000 of the capital stock of Union. In consideration thereof, and contemporaneously with the said transfer, the steel company hereby agrees that it will duly and legally guarantee the payment of the principal and interest of all of said $45,000,000 of bonds of Union as the same shall respectively become or be made due and payable according to the terms of said bonds. (MacRae Rept., p. 3641. See also Document K, MacRae Rept., p. 4350.)

This sudden increase in its capitalization by the Union Steel Co. just prior to its being taken over by the Steel Corporation indicates that the price paid was excessive. The character and extent of its plants and ore holdings, as stated by Mr. Kennedy, did not justify the expenditure of any such sum. In its answer to the suit of the Government the corporation admits that the production of the Sharon Steel Co. was small and that the capacity of the Union Steel Co. after the merger of the Sharon Steel Co. in November, 1902, was 180,000 tons of pig iron (as aginst 7,802,812 tons of the corporation in 1902). It produced 350,000 tons of steel ingots in 1902.

Says the Commissioner of Corporations:

> There can be no question that the prices paid by the Steel Corporation for both the coal and iron-ore properties were considerably in excess of a fair valuation at the time of the transfer. The real significance of the transaction seems to be that the Steel Corporation desired to eliminate the competition of certain influential interests back of the Union concern, particularly that of Mr. Frick, and that the amount necessary to induce these owners to retire from such competition was, in effect, charged against the ore and coal. (H. K. S. Rept., p. 286.)

The truth of this is corroborated by the fact that since the United States Steel Corporation has held this property and for a number of years it has not paid the interest on its bonds, the

> deficit being from $500,000 to $2,000,000 in some years and aggregating over $9,000,000 in nine years (see Exhibit 18c); and this failure to pay, it seems, was not upon the whole $45,000,000, but considerably less (see p. 282, Report of Commissioner of Corporations on Steel Industry, pt. i, July 1, 1911), the published reports of the United States Steel Corporation showing that only about $36,000,000 of these bonds were ever outstanding in the hands of the public, although it also appears that in 1905 (Union Steel Co., minutes of board of directors, Sept. 26, 1905) that the Union Steel Co. issued $3,874,000 of bonds in addition to those theretofore issued. (MacRae Rept., p. 3642.)
>
> A comparison of this amount of $75,860,501 paid and guaranteed for the Union-Sharon properties, with the valuation of the property of the seven large so-called independent steel concerns four years later, in 1907, is illuminating. These were as follows:
>
> | | |
> |---|---|
> | Bethlehem | $44, 450, 881 |
> | Cambria | 45, 281, 892 |
> | Colorado | 41, 919, 448 |
> | Jones & Laughlin (capital and bonds) | 45, 000, 000 |
> | Lackawanna | 65, 647, 388 |
> | Pennsylvania | 25, 377, 147 |
> | Republic | 53, 092, 153 |
>
> (MacRae Rept., p. 3643.)

Every circumstance attending the absorption of this company, which the Steel Corporation admits was its only active and aggressive competitor, indicates a clearly defined purpose to prevent competition and strengthen its grasp upon production and prices.

The Sharon Steel Co. was under contract to furnish raw materials to the Crucible Steel Co. A reduction in the price of this material was made upon the express condition that the "*leading interests are not to engage in competitive business.*"

The materials sold the Crucible Co. at a reduced rate were obtained only upon condition that it would not be resold without having previously passed through some stage of manufacture in the Crucible Co.'s works, and above all it was stipulated that—

> Tenth. The vendors severally agree with the steel company that they, respectively, will not, within the United States or Dominion of Canada, for a period of 10 years from December 1, 1902, engage directly or indirectly in the manufacture of iron or steel, or articles made therefrom, now manufactured by the steel company, the production of furnace coke, or the mining or production of iron ore, except in the Territory of Arizona and State of Florida, excepting, however, from the terms hereof the enterprises, if any, in which such parties may now, respectively, be engaged. (MacRae Rept., pp. 3641–3642.)

The purchase of the Troy Steel Products Co. by the United States Steel Corporation illustrates more forcibly than any abstract argument the pernicious effect of interlocking directorates and its tendency to favor and willingness to placate powerful interests at any price upon the first show of hostility or threat of competition.

TROY STEEL PRODUCTS CO.

This Troy Steel Products Co. was a Rockefeller concern, known by the officers of the Steel Corporation to be worthless, and after a thorough investigation of the plant as a manufacturing concern it was unanimously determined by the officers of the Steel Corporation that its acquisition was not advisable. On November 18 the executive committee determined—

> On the question as to whether or not the ownership of this property would be advantageous to the United States Steel Corporation, the president stated that he does not believe it is of any value to us. Mr. Converse said that the Carnegie people can deliver material on the wharf of the Troy Co. not only cheaper than it can be made there, but at a good profit.
>
> On motion, duly seconded, it was unanimously voted that the president be requested to decline to entertain the proposition concerning the Troy property. (MacRae Rept., p. 3649.)

At the time the executive committee unanimously declined even to entertain a proposition to purchase this plant which had not been operated for years, for the reasons stated by Mr. Converse, who was president of the tube company and thoroughly understood its worthlessness, John D. Rockefeller and H. H. Rogers were directors in the United States Steel Corporation. Finding that the corporation would not entertain the proposition of paying over a million dollars for a property which was valueless. Mr. Rogers stated:

> His company would construct its own pipe mills if arrangements satisfactory to his company could not be made with us. (See minutes executive committee July 15, 1902, MacRae Rept., p. 3648.)

Immediately the Steel Corporation changed its attitude with reference to the value of this Troy plant, as evidenced by the following entry in the minutes of the board of directors, January 6, 1903:

> A memorandum agreement was approved dated December 24, 1902, with A. C. Bedford, representing John D. Rockefeller, H. H. Rogers, and others, being the owners of a majority of the securities of the Troy Steel Products Co., which company is the owner of the plant known as the Troy steel plant, not less than a majority interest to be purchased for the sum of $1,100,000, payable either in cash or in the proposed second mortgage 5 per cent bonds. (MacRae Rept., p. 3646.)

After its purchase this plant was never operated, and is not totally dismantled and abandoned. The purchase of this company in no way added to the efficiency of the Steel Corporation, and the directors knew it at the time the purchase was made. There could have been no intention to have operated this plant, and the amount paid for it was necessarily either a bonus taken from the assets of the Steel Corporation and presented to Messrs. Rogers, Rockefeller, and others without valid consideration, or it was with no other conceivable consideration than to prevent this company from carrying out the threat previously made "to go into the tube business," which seems to have been the vulnerable point of attack in the opinion of Carnegie, Rockefeller, and others when contemplating competition in any form with the Steel Corporation.

TRADE AGREEMENTS.

Many of the old and established companies remaining after this process of elimination was completed entered into secret and iron-clad agreements by which the output of all the contracting parties was determined and each company's proportion of that output fixed and allotted, and such output was to be sold only according to a schedule of prices binding upon the contracting parties, and to carry out the agreement a commissioner was appointed and empowered to examine the books and ascertain the most intimate details of the business of these companies. To him they made regular and frequent reports, stating the amount of iron and steel produced and the price at which it was sold. This commissioner was authorized to impose heavy fines and penalties in case of violations of any part of this agreement. In the event any of the contracting parties exceeded the specified allotment the profits on such sale were distributed among the other parties to the agreement. These agreements covered plates, structural shapes, shafting, wire, nails, steel rails, and almost all other products. Copies of agreements entered into at various times between the Carnegie Steel Co., Jones & Laughlin, the Crucible Steel Co. of America, the Cambria Steel Co., the A. & P. Roberts Co., and other steel concerns will be found as Appendix B to this report.

It is said by Judge Gary that he had no knowledge of any such conventions by subcompanies of the Steel Corporation. The commissioner, however, asserts that these agreements were discontinued after a suggestion by Judge Gary that they were no longer advisable or necessary, but that he still continued to act as commissioner for several years afterwards.

Houston and others of the Lukins Iron & Steel Co. testified before this committee to the same effect Such contracts could not, of course, have been entered into without the full knowledge and approval of the presidents of the various companies manufacturing articles sold under them, and the organization of the Steel Corporation was such as to make it highly improbable that any arrangement of this kind could have been entered into without the consent and approval of the governing powers of the Steel Corporation. The authority and discretion of the presidents of the subsidiary companies was, in fact, exceedingly limited. No expenditure of over $10,000 could be made by the head of any subsidiary company without the approval of the executive committee in New York.

The directors of the Steel Corporation have at all times possessed the most intimate and accurate knowledge of the actions of the subsidiary companies, and the presidents of these companies are required to report to the president of the United States Steel Corporation and to the board of directors all transactions affecting large expenditures of money or any change in policy whatever. The nature and extent of the control of the corporation over the affairs of the subsidiary concerns and the duties of the presidents of these companies are set out in detail in the minutes of the United States Steel Corporation.

> These companies, respectively, have complete organizations, including working committees composed of the presidents, vice presidents, managers, mill superintendents, etc., who are always in close touch with the affairs of the corporation with which they are connected, and the presidents of the different companies frequently meet for interchange of views. The conclusions of the officers of subsidiary companies are reported to different departments of the United States Steel Corporation and recommendations (but not instructions) frequently made by the latter to the former. This corporation, acting through one or more of its managing officials, is in frequent communication with the presidents of subsidiary companies, respectively, concerning the business and business methods of all subsidiary companies. If any question arises which involves a departure in any respect from general lines of policy which have been adopted, the same is brought before the executive committee of this corporation for consideration, determination, and advice. If any question of finance is involved, the action and determination of the executive committee is referred to the finance committee of this corporation for consideration, determination, and advice. If the executive committee is not in session at any time, the chairman of the executive committee possesses the powers of the committee. If the finance committee is not in session at any time, the chairman of the finance committee possesses the powers of the committee. It is very seldom that the chairman of either committee exercises the powers of the committee without action of the committees, respectively, or at least the advice of a majority of the committee, except as to certain matters which have been particularly placed in charge of the chairman of the executive committee by this board.
>
> As an illustration of the method of transacting business, let it be supposed that one of the subsidiary companies is desirous of making a substantial expenditure for improvements, or of entering into a contract of sale or purchase involving large sums of money, or of making some important change in policy, the officer, or manager, or superintendent who first suggests the proposed action will make recommendation to his superior officer, giving his reasons in detail. This will reach the president of the particular company and be considered by his committee. After decision the subject is submitted to the president, or a vice president, or other officer, of the United States Steel Corporation, and is brought before its executive committee for consideration. After the question has been considered by the executive committee, if a question of money is involved (and generally if a question of policy is involved) the subject is taken by the chairman of the executive committee (who is, ex officio, a member of

> the finance committee) to the finance committee, and there considered. Recommendations which are decided upon by the executive committee or finance committee, or both, are reported to the president of this corporation, who in turn conveys intelligence of the same to the president of the company directly interested. Besides, the president and vice presidents and chairman of the executive committee and chairman of the finance committee are in daily communication with one another concerning the various matters of business which are under consideration from day to day. (Minutes of the board of directors, Oct. 7, 1907, MacRae Rept., pp. 4330–4331.)

After operating for several years under these agreements each company acquired such an intimate knowledge of the business of its alleged competitors that it became unnecessary to enforce heavy penalties or to require any drastic regulation to compel the remaining companies to cooperate either by limiting the output or selling at a fixed price. Temple, the commissioner of the plate pool, describes the change of attitude by the partners of these companies to one another as a result of intimate association and the discipline previously enforced by the contracts under which they had been operating:

> Mr. TEMPLE. As I said, at the beginning of those associations practically everybody wore a knife and tomahawk whenever they came to me. Every man's hand was against every other man. They had lived through this period of intensive, not only destructive but annihilative, competition, and some of them scarcely knew each other by sight. They had been led to believe they were pirates and thieves, and the fact they were all human beings merely endeavoring to make an honest living and run a successful business had not seemed to occur to them at all. After a very few meetings they commenced to get acquainted with each other, found they were all human, and the suspicion, the intense suspicion, amounting to almost certainty of intended fraud, ceased to be so apparent. So that at the end of the first year they were all good friends. Then they began exchanging actual information with each other. There was scarcely any question that one maker would ask another that he would not answer, even about the most intimate secrets of his business, his costs, and things of that sort. It made the steel business, so far as the people associated with those associations were concerned, rather a family affair than one of destructive warfare. They had confidence in each other and confidence in the stability of the business.
>
> The CHAIRMAN. They began to practice what might be termed the golden rule among themselves.
>
> Mr. TEMPLE. As I think any business concern will when they find that their competitors are men, and the greatest rascal I ever knew certainly appreciates a square deal from the other fellow.
>
> The CHAIRMAN. Who was the apostle of this new industrial religion among these contracting parties?

Mr. TEMPLE. I think at the beginning of the greatest harmonizing influence in the whole lot was Mr. Schwab, who was president of the Carnegie Steel Co.

The CHAIRMAN. Those contracts were abrogated, were they not?

Mr. TEMPLE. In 1904 the contracts were all abrogated.

Mr. YOUNG. That is, the structural steel contract.

Mr. TEMPLE. And the plate. They were all abrogated in December, 1904, and the whole thing wiped out.

The CHAIRMAN. At whose suggestion?

Mr. TEMPLE. We were informed at Mr. Gary's suggestion.

The CHAIRMAN. Gary's?

Mr. TEMPLE. Yes.

* * * * * * *

The CHAIRMAN. Could they maintain, by these gentlemen's agreements, that level of prices and prevent that destructive competition of which you spoke in the Carnegie régime?

Mr. TEMPLE. They say the leopard can not change his spots nor the Ethiopian his skin; but the leopard does move from place to place, which, in one figure of speech, is a changing of spots. I would not presume to say how closely they could follow the rules they have learned under the bitter warfare preceding 1907 and the different conditions from 1897 to 1904, but I have not heard of any destructive competition since that time. (Hearings, pp. 1717–1719.)

THE GARY DINNERS.

Prior to 1907 the methods employed in restraint of trade were undergoing an evolutionary process. The old pooling agreements were annoying in their requirements and dangerous in their operation. As originally formed they exacted severe penalties for violation of any of their terms; but a few years' experience showed that these agreements could be kept without imposing penalties. They were originally organized and conducted in direct violation of the law, with the consequent danger of prosecution and punishment. By 1905 the understanding between the members of these associations had become so perfect, confidence in each other so established, and observance of these agreements so habitual that it was determined that it was no longer necessary to have written agreements as to what their respective shares of the business should be. During 1905 and 1906, while they operated under the supervision of the same paid commissioner, they relied upon frequent meetings, intimate acquaintanceship, frank interchange of opinions, and assurances to bring about the harmonious cooperation so much desired and to avoid the dangers of actual and active competition on the one side and a plain and palpable violation of the law upon the other.

In accomplishing these results, trade conditions during 1905, 1906, and the first nine months of 1907 were extremely favorable. All sections of the country seemed to be enjoying a high degree of prosperity, with a flattering prospect for its continuance; and this condition was reflected in the steel trade in an active demand for steel products, and the maintenance of steady prices was easy.

In October, 1907, the panic came with its threatened paralysis of business and demoralization of prices. It was Judge E. H. Gary who conceived the idea of extending to the entire steel industry the system of cooperation that had been so successful among the various groups remaining after the dissolution of the structural steel, steel plate, and other associations, and the Gary dinner was the agency devised.

The first Gary dinner was given November 20, 1907 and they continued at varying intervals until after this investigation was authorized in 1911.

Judge Gary before this committee gave an account of their origin and purpose as follows:

> Now, the question was how to get between the two extremes of securing a monopoly by driving out competition, however good-naturedly, in a bitter, destructive competition or without making any agreement, express or implied, tacit or otherwise, which should result in the maintenance of prices; and so, gentlemen, I invited a large percentage of the steel interests of the country to meet me at dinner and then presented these views to them and, so far as I could, the results of our becoming demoralized and extreme decreases in prices like those which obtained under the old régime. Then, I said that it seemed to me the only way we could lawfully prevent such demoralization and maintain a reasonable steadiness in business, whether we lowered the prices from time to time or not, whether depending upon circumstances we were willing to make concessions or reductions after the jobbers had relieved themselves of the large lots, so as to prevent demoralization, was for the steel people to come together occasionally and to tell one to the others exactly what his business was. In other words, a disclosure by each one to all others of all the circumstances surrounding his particular business. In other words, to state it simply, if three men, gentlemen on this committee, were practicing law in a certain town and each one knew that the customary fee for services in court was $50 a day and a gentleman from another part of the country should locate in that town and make a totally different price, very much lower, he would immediately get up some sort of competition amongst these professional men. If those three men, however, on this committee, were in daily conference and each one knew that the others did not propose to change the fees, probably this outsider would not make very much headway in creating a demoralization. (Hearings, p. 77.)

At one of these dinners more than 90 per cent of the entire iron and steel industry of the United States was represented. (Hearings, p. 1776.) At these dinners representatives of the press, except three trade papers, were excluded. (Hearings, p. 75.)

The remarks of Judge Gary at the dinner given in December, 1908, and the various speeches made at the dinner given in January, 1911, and at the luncheon of May 4, 1911, are given in the record of this committee. (Hearings, pp. 1773–1812.) Consideration of these remarks, keeping in mind the conditions under which they were made and what had gone before, leads us to the conclusion that the Gary dinners were devised to circumvent the Sherman antitrust law by avoiding direct and positive agreements in restraint of trade and yet to secure all the benefits involved in a restriction upon output and a maintenance of prices. For justification of this conclusion we submit the following excerpts from these remarks:

> At this particular time there is not in this country a demand for more than 50 per cent of the total producing capacity in our lines. It is obvious from this statement of fact that there is not enough business to go around, and that there is no possible way of protecting one another and thereby protecting oneself except to submit ourselves to the conditions as they exist and to take and be satisfied with our fair proportion of the business which is offered. [Applause.] (Judge Gary, hearings, p. 1776.)

In the following quotation Judge Gary explains the difficulties and dangers involved in any direct arrangement to interfere with the laws of trade and then stresses the fact that "we have something better to guide and control us in our business methods than a contract which depends upon written or verbal promises with a penalty attached."

> Now, in view of the fact that we have no right legally to enter into any arrangement by direct or indirect means which enables us to maintain prices, to divide territory, to restrict output, or in any way to interfere with the laws of trade or to stifle competition; in view of the fact that we can not legally, directly or indirectly, do anything which may be construed to be in restraint of trade, and therefore are relegated to the one position of treating each other on the basis of fair, just, and equitable treatment, it behooves us to use the greatest care in the exercise of our rights and in the transaction of our business, so as to make it absolutely certain that day by day, and with reference to every transaction we are certain to recognize the rights of our competitors, our friends, and the obligations which we are under toward them.
>
> I say in this presence, to men who know by long experience—men who know to a demonstration that what I speak is true and logical—that we have something better to guide and control us in our business methods than a contract which depends upon written or verbal promises with a penalty attached. We as men, as gentlemen, as friends, as neighbors, having been in close communication and contact during the last few years, have reached a point where we entertain for one another respect and affectionate regard. We have reached a position so high in our lines of activity that we are bound to protect one another; and when a man reaches a position where his honor is at stake, where even more than life itself is concerned, where he can not act or

> fail to act except with a distinct and clear understanding that his honor is involved, then he has reached a position that is more binding on him than any written or verbal contract. [Applause.] (Hearings, pp. 1776–1777.)

In the following quotation Judge Gary pays tribute to the spirit of mutual confidence among manufacturers of steel that had been developed, and rejoices that the point had been reached where each was willing to lay his business down upon the table for the inspection of his neighbors:

> Is it any wonder that such as I, coming a few years ago from another profession, having spent his time in other lines of activity, coming into this business without knowledge of the business or acquaintance with those connected with it, groping along in more or less uncertain paths, but eventually reaching the position which we have reached in our travels, so that we can have and do have absolute confidence in one another, willing to lay our business down upon the table for the inspection of our neighbors—is it any wonder that I should be elated, that I should be happy, that I should be proud of the fact that I am associated with such as you; that in representing the interests of a large corporation I can do business with so many men of prominence, education, experience, high standing, and repute in the community, feeling all the time that I and the interests I represent are absolutely safe in your hands? (Hearings, p. 1777.)

Throughout the remarks of Judge Gary, as we interpret them, there is a skillful and ingenious effort to impress upon his guests that it was the purpose of the United States Steel Corporation to maintain prices and that they were expected to do likewise.

> At the present time the question of maintaining or changing the prices of the commodities in which we deal is uppermost in our minds, because we read and hear about this question every day and almost every hour. I have been pained, I admit, from time to time, to read in the newspapers that the United States Steel Corporation carried a big stick, and was in the habit of inviting the Independents, so called, to come together for the purpose of lecturing them, or, worse than that, of threatening them in case they proposed to reduce prices. I call upon you as witnesses to refute these insinuations.
>
> * * * * * * *
>
> Now, my opinion is that it would be a mistake to reduce prices at this time; that it would do more harm than good; that instead of getting more business we would get less business; that the average purchaser, perhaps without exception, is not so much in favor of the reduction of prices as he is in favor of making it absolutely certain his prices are the same prices that another has to pay for the same commodity.
>
> * * * * * * *
>
> It is argued in some of the newspapers that we are making a mistake in maintaining prices because we are keeping large numbers of our employees from work. I do not think the claim

> is logical or reasonable. I doubt if we would get more business if we should reduce prices. (Hearings, pp. 1776–1777.)

Those who followed Judge Gary at this dinner responded most generously to his protest against reduction of prices as shown by the following:

Willis L. King, general manager Jones & Laughlin Steel Co., and former treasurer of Steel Plate Association and Structural Association, said:

> I think, therefore, to talk of reducing the prices ought not to be considered for a moment. As Judge Gary has very properly said, it would not result in good to anyone, it would not result in more business to us, it would not do the public any good; therefore I hope it will be the consensus of opinion here to-night that we will maintain the present prices, which are fair and reasonable, and await with patience the inevitable result which will, of course, be better business, and I think in the very near future. (Hearings, p. 1783.)

E. C. Felton, president Pennsylvania Steel Co., said:

> Now, I think we have all had our eyes opened since the first meetings that were held here, and I hope we are going to keep our eyes opened, and are not going to shut them up to the situation. If there is anybody who thinks the present business situation will be improved, stimulated, by cutting prices he ought to consider just one branch of our business; he should look at the facts and argue from those facts. Let him look at the pig-iron situation. (Hearings, p. 1784.)

John A. Topping, chairman Republic Iron & Steel Co., said:

> I am more convinced than ever that any efforts at this time to reduce prices with a view to stimulating consumption will be met in about the manner that Mr. Felton has illustrated. The price line will go down much faster than the production line will go up. (Hearings, p. 1784.)

E. A. S. Clark, president Lackawanna Steel Co., said:

> While I think it is well to coach salesmen, we must put into them the very same spirit I think we all have here, that we are in honor bound not to change our prices without letting the other man know it, because then the salesman knows that he has an answer to give to that proposition. (Hearings, p. 1785.)

C. S. Price, president Cambria Steel Co., said:

> I will only speak of the business situation, and indorse the fact that I consider it very inopportune at this time to make any change in prices. (Hearings, p. 1786.)

A. F. Huston, president Lukens Iron & Steel Co., said:

> We are all of the same opinion about the maintenance of prices. I heard the remark made by a prominent steel man last month. He said he had never seen a genuine buying movement without first a decided drop in prices to stimulate it. I have been thinking of that a good deal since. He probably

> never saw anything else in the past. I do not remember at any time when a genuine buying movement started when there was not a drop in the price, before we stood together. (Hearings, p. 1791.)

L. A. Kelly, president Ashland Steel Co., said:

> I heartily cooperate in everything that has been said here to-night, and so far as our company is concerned we are ready and willing to still cooperate to do what we can to maintain prices. (Hearings, p. 1795.)

Accepting this dinner of January, 1911, as fairly typical of the rest and the things said and done there as fairly representative of the things said and done at the others, we think the conclusion is irresistible that the Gary dinners were instituted as a means of conveying to the entire steel and iron industry information as to what the attitude of the United States Steel Corporation was upon the questions of output and prices and of impressing upon all engaged in the industry that it was the part of wisdom and prudence to govern themselves accordingly. We further believe that by this means prices were maintained, output restricted, competition stifled, and trade restrained, just as certainly, just as effectively, and just as unlawfully as had been done under the discarded pooling agreements of former years.

LABOR.

The evidence submitted to the committee on the matter of labor is instructive and impressive.

A most important economic fact brought out and too often overlooked is that the true measure of a man's work is the tonnage produced per man per day, and not the mere amount of wage paid. The true economic unit is the tonnage produced per man, and not the wage paid per man. This is a most important fact, never to be lost sight of in the all-important question of cost production.

A most illuminating piece of reliable information on this point is the report of the secretary of internal affairs of the State of Pennsylvania on the production and cost of pig iron, which we quote for the years 1902 and 1909, in order that comparison may be made:

Pig iron in Pennsylvania.

[Report of secretary of internal affairs, 1902, p. 403; 1909, pp. 255-256.]

	1902	1909
Production (gross tons)	8,111,642	10,721,024
Realized value	$126,857,231.00	$186,963,842.00
Average realized value per ton	$15.64	$17.44
Value of basic material; ore, scrap ore, cinder only (fuel, limestone, and other expenses not considered)	$61,634,972.00	$89,144,483.00
Same per ton	$7.60	$8.31
Average number of days in operation in 1902	314	300
Total number of workmen employed	17,101	14,921
Aggregate wages paid	$10,191,759.00	$8,762,304.00
Average earnings per year for each man	$595.97	$627.20
Average daily wage	$1.89	$2.09
Cost of labor per ton	$1.25	$0.82
Tonnage per man per day	1.51	2.39

It will be seen from the above report that in 1909, 14,921 men produced 10,721,024 tons of pig iron, as against 8,111,642 tons produced in 1902 by 17,101 men.

Who got the benefit of this enormous increase in production? True, there was some increase in the wages. In 1902 the average earnings per year for each man was $595.97, while in 1909 the average earnings per year for each man was $627.20, an increase per man per year of $31.23. Or, to put it in daily wages, an increase of from $1.89 in 1902 to $2.09 in 1909—an increase of $0.20 per day.

But, observe the increase in production, and the decrease in cost of labor per ton, "the true measure," according to Mr. Schwab.

In 1902 the cost of labor per ton was $1.25, while in 1909 it was only 82 cents.

Again, observe the tonnage produced per man in 1902 and 1909.

In 1902 the tonnage per man was 1.51 tons, while in 1909 it was increased to 2.39 tons per man.

In other words, not only was the cost of labor per ton reduced from $1.25 to $0.82, but at the same time the tonnage per man produced was increased from 1.51 tons to 2.39 tons.

In 1902 the manufacturers produced 8,111,642 tons of pig iron at a cost of labor per ton of $1.25; while in 1909 they produced 10,721,024 tons of pig iron at a cost of labor per ton of $0.82.

In 1902 the aggregate wages paid to produce 8,111,642 tons of pig iron was $10,191,757, while in 1909 the aggregate wages paid to produce 10,721,024 tons was $8,762,304, a saving to the manufacturers in labor cost of $1,429,455.

Furthermore, the realized value of the 8,111,642 tons produced in 1902 was $126,857,231; while the realized value of the 10,721,024 tons produced in 1909 was $186,963,842, an increase for the manufacturers of $60,106,611 in realized value.

On the other hand, what did labor get in the same period? In 1902 the average earnings per year for each man was $595.97, while in 1909 it was $627.20, an increase per man of $31.23 per year, and as the table shows, an increase in average daily wage from $1.89 to $2.09, or $0.20 per day. This shows a slight increase per man in wages between 1902 and 1909. But how about the total? In 1902 there were employed 17,101 men; in 1909, 14,921 men, a decrease of 2,180 men employed. In 1902 the aggregate wages paid were $10,191,759; in 1909 the aggregate wages paid were $8,762,304, a decrease in wages paid of $1,429,455.

That these statistics of the report of the secretary of internal affairs are correct is corroborated by Mr. Schwab, former president of the Steel Corporation, by his sworn testimony, on page 1356, as follows:

> The CHAIRMAN. The average daily wage in 1902 was $1.89. Is that about the rate for men working around pig iron?
>
> Mr. SCHWAB. Yes; I think so.
>
> The CHAIRMAN. In 1909 it was $2.09?
>
> Mr. SCHWAB. Yes.
>
> The CHAIRMAN. Is that about your average wage?
>
> Mr. SCHWAB. I think so.
>
> The CHAIRMAN. The cost of labor per ton, then, in 1902 was $1.25. Is that about right?
>
> Mr. SCHWAB. Yes, sir.

The CHAIRMAN. And in 1909 it was 82 cents. Is that about right?

Mr. SCHWAB. I should imagine that was about right.

The CHAIRMAN. The tonnage per man per day, which you say is a true measure of the value of a man's work, in 1902 produced 1.51 tons of pig iron, and in 1909, 2.39 tons of pig iron. Is that about right?

Mr. SCHWAB. I should judge that was about right.

LABOR UNIONS.

The attitude of the United States Steel Corporation toward organized labor was early determined. On June 17, 1901, six weeks after the Steel Corporation was organized and began operations, a meeting of the executive committee was held in New York City. At this meeting Mr. Charles Steele, then a member of the firm of J. P. Morgan & Co., and also a member of the executive committee of the Steel Corporation, was present. The question of the attitude of the corporation toward organized labor was extensively discussed at this meeting. As a final result of the deliberations of the executive committee, Mr. Steele brought forward the following proposition, which the records show was finally voted upon, and the president of the Steel Corporation instructed to convey it to the presidents of the subsidiary companies, to wit:

> That we are unalterably opposed to any extension of union labor and advise subsidiary companies to take firm position when these questions come up and say that they are not going to recognize it, that is, any extension of unions in mills where they do not now exist; that great care should be used to prevent trouble and that they promptly report and confer with this corporation.

Following that declaration, the evidence clearly shows how American laborers felt. Justly or unjustly, they considered themselves persona non grata in the works of the United States Steel Corporation. Thereafter the great bulk of American union laboring men in the iron and steel industry understood they were not wanted at the works of the United States Steel Corporation. The process of filling the places of these union laborers is interesting and important to observe. American laborers loyal to their unions could not be had. Something had to be done to get laborers. Southern Europe was appealed to. Hordes of laborers from Southern Europe poured into the United States. They were almost entirely from the agricultural classes, knew absolutely nothing about iron and steel manufacture, but were sufficient to fight the labor unions. They were absolutely unskilled, but they could work, especially as common laborers. In times of special necessity even advertisements for foreign help of this class were spread broadcast. A sample of these advertisements, which the evidence shows were caused to be circulated by subsidiary companies of the Steel Corporation, is as follows:

> *Wanted.*—Sixty tin house men, tinners, catchers, and helpers to work in open shops; Syrians, Poles, and Roumanians preferred; steady employment and good wages to men willing to work; fare paid and no fees charged for this work. Central Employment Bureau, 628 Pennsylvania Avenue.

This advertisement appeared, as the evidence shows, in the Pittsburgh Gazette-Times of July 14, 1909. (See page 3074 of hearings.)

The result is that about 80 per cent of the unskilled laborers in the steel and iron business are foreigners of these classes. With the benefit of a skilled American foreman such a crew can work out results in unskilled labor production. The profits of this system of labor employment go to the Steel Corporation, while the displaced American workman shifted as best he could.

Following the elimination of union labor, and the introduction of the above-described foreign laborers, an investigation was made as to the conditions of laborers, hours of labor, home life, etc. As to the hours of labor, the evidence before the committee was conclusive that long hours of labor prevailed in the iron and steel industry, especially in the unskilled departments. Under the direction of the United States Commissioner of Labor, a very careful and thorough investigation as to the hours of labor in the steel industry has been made. From this official report we quote without comment:

> During May, 1910, the period covered by this investigation into the steel industry, 50,000 persons, or 20 per cent of the 153,000 employees of the blast furnaces, steel works, and rolling mills covered by this report, customarily worked seven days per week, and 20 per cent of them worked 84 hours or more a week, which, in effect, means a 12-hour working day every day in the week, including Sunday.
>
> This hardship of 12-hour days and a 7-day week is still further increased by the fact that every week or two weeks, as the case may be, when the employees on the day shift are transferred to the night shift, and vice versa, employees remain on duty without relief either 18 or 24 consecutive hours, according to the practice adopted for the change of shifts. The most common plan to effect this change of shift is to work one shift of employees on the day of change through the entire 24 hours, the succeeding shift working the regular 12 hours when it comes on duty.

(See page 2837, hearings.)

While we deem it unnecessary to quote the testimony of other witnesses, it is true, as the testimony shows, that they fully corroborate these statements of the United States commissioner, and, in fact, some of the witnesses are much stronger in their statements.

As to the daily lives and conditions of living of these laborers, the testimony taken is voluminous, far too extensive to even summarize in this report. The testimony certainly shows conditions undesirable, and far below what is ordinarily understood to be the American standard of living among laborers in our country. Some of the details are revolting, both as to sanitary and moral conditions. Taking the ordinary family as a unit, the wages paid, even if the head of the family is constantly employed, are barely enough to provide subsistence.

THE COMPANY SUPPLY STORE.

As bearing on the question of employes, the policy of the Steel Corporation in regard to the establishment of the company supply stores is important. The evidence before the committee shows that it is the custom of the company where steel and iron plants are established and towns and villages grow up around the company's plants, through a subsidiary company known as the Union Supply Co., to open stores to supply its employees with groceries, provisions, and almost every article of household necessity, together with powder, fuse, and other supplies—in fact everything the employees need, either to live or conduct their operations as employees of the company.

The local grocer, baker, meat and fish dealer, apothecary, blacksmith, carpenter, coal, wood, and other dealers are thus brought into direct competition with the Steel Corporation stores. It may be said that this is only the application of fair and free competition. But this is not wholly so. The company stores have great advantages. They deal with their own employees, who constitute 90 per cent of their custom. To be sure the employees are not obliged by any law or rule of the company to buy at the company store, but it is undoubtedly true that they all understand they will be the better considered for doing so. The company supply store knows just what is coming in wages every day and week to each employee who deals at the company store. No other local competitor has the benefit of this information. This enables the company's supply store to extend credit only to the extent of wages actually due or earned. The result is practically an actual cash business, with no losses in bad debts.

The fact that the Steel Corporation does not attempt to maintain these supply stores except where it deals with its own employees, shows pretty conclusively that it has no desire to engage in such trade under ordinary conditions in ordinary competition. It limits its stores to places where it deals almost wholly with its own employees.

The profits made and dividends declared to the Steel Corporation by this system of supply stores we think are pertinent and sufficient to show a prosperity entirely out of the ordinary.

This supply company was organized in March, 1902, about a year after the Steel Corporation itself. Its capital stock is $500,000. Its corporate name is Union Supply Co., and it is one of the subsidiary companies of the United States Steel Corporation.

In 1903, this $500,000 subsidiary corporation declared a dividend of $250,000, and in subsequent years as follows:

1904	$250,000
1905	405,000
1906	805,000
1907	500,000
1908	320,000
1909	440,000
1910	520,000

It will thus be seen that this corporation earned and paid its parent company, the United States Steel Corporation, in dividends a total of $3,490,000 in eight years on retail supplies sold almost wholly to its own employees.

The following table shows these dividends in detail:

Dividends declared by Union Supply Co.

Date of meeting when declared.	Per cent.	Amount for dividends.
1. May 27, 1903	10	$50,000
2. Sept. 23, 1903	20	100,000
3. Dec. 28, 1903	20	100,000
		250,000
4. Mar. 23, 1904	10	50,000
5. June 22, 1904	10	50,000
6. Aug. 24, 1904	10	50,000
7. Oct. 26, 1904	10	50,000
8. Dec. 28, 1904	10	50,000
		250,000
9. Feb. 22, 1905	10	50,000
10. May 24, 1905	15	75,000
11 July 26, 1905	15	75,000
12. Aug. 23, 1905	20	100,000
13. Sept. 27, 1905	7	35,000
14. Oct. 28, 1905	7	35,000
15. Nov. 18, 1905	7	35,000
		405,000
16. Jan. 22, 1906	7	35,000
17. Feb. 21, 1906	7	35,000
18. Mar. 21, 1906	7	35,000
19. Apr. 18, 1906	7	35,000
20. May 16, 1906	15	75,000
21. June 20, 1906	8	40,000
		255,000
22. July 18, 1906	16	80,000
23. Aug. 15, 1906		40,000
24. Sept. 19, 1906		40,000
25. Sept. 27, 1906	10	50,000
26. Nov. 21, 1906	8	40,000
27. Dec. 20, 1906	9	45,000
		550,000
28. Jan. 9, 1907	8	40,000
29. Feb. 20, 1907	8	40,000
30. Mar. 20, 1907	8	40,000
31. May 15, 1907	16	80,000
32. June 19, 1907	8	40,000
33. July 17, 1907	16	80,000
34. Aug. 21, 1907	8	40,000
35. Sept. 18, 1907	8	40,000
36. Nov. 20, 1907	8	40,000
37. Dec. 18, 1907	12	60,000
		500,000
38. Jan. 15, 1908	8	$40,000
39. Feb. 19, 1908	8	40,000
40. Apr. 15, 1908	8	40,000
41. May 20, 1908	8	40,000
42. July 15, 1908	8	40,000
43. Sept. 16, 1908	16	80,000
44. Nov. 18, 1908	8	40,000
		320,000
45. Jan. 13, 1909	8	40,000
46. Feb. 17, 1909		40,000
47. Apr. 21, 1909		40,000
48. May 19, 1909		40,000
49. June 16, 1909		40,000
50. July 21, 1909	8	40,000
51. Aug. 18, 1909	8	40,000
52. Sept. 15, 1909	8	40,000
53. Oct. 20, 1909	8	40,000
54. Nov. 17, 1909	8	40,000
55. Dec. 15, 1909	8	40,000
		440,000
56. Jan. 12, 1910	8	40,000
57. Feb. 16, 1910	8	40,000
58. Mar. 16, 1910	8	40,000
59. Apr. 20, 1910	18	80,000
60. May 18, 1910	8	40,000
61. June 15, 1910	8	40,000
62. July 19, 1910	8	40,000
63. Aug. 17, 1910	8	40,000
64. Sept. 21, 1910	8	40,000
65. Oct. 19, 1910	8	40,000
66. Nov. 16, 1910	8	40,000
67. Dec. 21, 1910	8	40,000
		520,000
68. Jan. 24, 1911	8	40,000
69. Mar. 15, 1911	8	40,000
70. Apr. 19, 1911	8	40,000
71. May 17, 1911	8	40,000
72. June 21, 1911	8	40,000
73. July 18, 1911	8	40,000
74. Aug. 16, 1911	8	40,000
75. Sept. 20, 1911	8	40,000
		320,000

OWNERSHIP OF COMMON CARRIERS.

The Steel Corporation, in the conduct of its business, has obtained control of various railway and steamship lines by which its raw material is transported from the ore beds of the Northwest to the plants of the corporation. Much of the ore consumed by the competitors of the corporation is carried over these various lines of transportation. These transportation facilities are of three classes, viz, railroads, lake vessels, and docks for the transshipment of ore from vessels to railways.

The corporation owns two railroads operating in the lake ore-mining district, known as the Mesabi Range, viz, The Duluth, Missabe & Northern Railway and the Duluth & Iron Range Railroad. It likewise owns the largest fleet of ore-carrying vessels of the Great Lakes, which is operated under the name of the Pittsburgh Steamship Co. At the ports upon Lake Erie it owns or operates docks for the transshipment of ore destined for points beyond, the more important of which, perhaps, is the Pittsburgh & Conneaut Harbor. This dock handles all the ore moved over the Bessemer & Lake Erie, likewise owned by the corporation, which railroad furnishes the means of carrying the ore from the lake port to the Pittsburgh district, where it is turned over to the Union Railroad, a belt line and another subsidiary of the Steel Corporation, which serves its various plants in that district.

In addition to the lines of railway the corporation has other important railway properties which are useful in transporting ore, particularly in the Chicago district where it owns the Elgin, Joliet & Eastern, which railroad has absorbed and now operates what was formerly known as the Chicago, Lake Shore & Eastern, forming the connection with the docks and plants of the corporation in the vicinity of Chicago and with trunk lines east and west.

The corporation also owns several terminal lines at other points, viz, The Newburgh & South Shore at Cleveland, Ohio, the Lake Terminal at Lorain, Ohio, and the Birmingham Southern at Birmingham, Ala.

Through these various lines the corporation is able to transport its ore, or the great bulk of it, from the mines to the blast furnaces. For instance, taking the year 1910, there were transported that year 45,000,000 tons of ore from the Northwest or lake region of which the corporation, by its two railroads in the ore territory moved 28,000,000 tons, or 67 per cent. During that same year the corporation carried over its water line about 50 per cent of the ore. In the Pittsburgh district practically all the ore used by the corporation is hauled over its own line of railway—Bessemer & Lake Erie—from Conneaut Harbor.

The making of rates upon ore is by agreement among the railroads, and though a denial has been entered that the corporation rail lines have been parties to the making of such rates, the fact remains that they have been beneficiaries of high rates which have been maintained upon ore, both in the initial haul to the docks at Duluth and in the final transportation from the docks on Lake Erie. There has been no consistency in these rates as, for example, the Pittsburgh territory is charged 96 cents for an approximate haul of 135 miles while Wheeling, distant 160 miles, is charged, via the same lines, but 60 cents per ton. Of course to the extent that an unreasonable and highly profitable charge is made upon ore by the various carriers to that extent is the Steel Corporation benefited when it transports its own ore, thereby reaping the profit which accrues upon the rail or water movement. Various estimates have been made as to the actual benefit, as reflected in the cost of producing a ton of pig iron, which the Steel Corporation has profited by reason of its ownership of transportation lines. Just what the actual figures may be as to the advantage of the corporation in this regard is not so important as is the undisputed fact that it does have a conceded advantage over its competitors by reason of its ownership of these lines of transportation. As illustrating this fact it may be said that the rates for transporting ore by rail from the mines to upper lake ports were, until June, 1911, 80 cents and $1 per gross ton over the respective lines of railroad owned by the corporation. These rates have since been reduced and leveled to 60 cents per gross ton, which is a plain confession of the fact that these rates have been exorbitant in the past. It is fairly deducible from the public reports of these lines that the 60-cent rate is still excessive.

The profits of the steamship line and the dock company at Conneaut are shown by the record to be excessive. Particularly is this true of the profit on the dock, which is grossly out of proportion to the cost of conducting the business and a fair return upon the value of the property used therefor. Likewise we may say that the profits for the carriage of this ore over the Bessemer & Lake Erie and its terminal, the Union Railroad, are unjustifiable. The benefits due to the ownership and operation of these transportation lines is clearly reflected in the earnings of the corporation and may be traced through all its operations until it finally reaches the form of a dividend.

Independent competitors of the Steel Corporation have complained bitterly against the corporation's operation of transportation lines, and have made it clear that the advantage which is derived by the corporation as a result of such ownership is a serious handicap to them in the competitive market. There is no question that public interest requires a segregation of railroads and the Steel Corporation. The control of such public agencies by an industrial corporation carries with it, in addition to the advantages which this record discloses, possibilities of even greater abuses.

By reason of the ownership of the Union Railroad in the Pittsburgh district the corporation derives an allowance out of the rate on all commodities inbound and outbound from the mills of the corporation. Upon raw materials for use at the plants of the corporation the Union Railroad receives 10 cents per ton and on all finished materials outbound from the mills the railroad receives 15 cents per ton.

By substituting the Bessemer & Lake Erie for the Union Railroad, as convenience or interest may suggest, that railroad company receives a percentage of the rate on outbound shipments from the corporation's mills, amounting, in some instances, to a very substantial part of the rate.

The Elgin, Joliet & Eastern also receives rate divisions on raw materials destined for the Steel Corporation far in excess of what the Interstate Commerce Commission has, after investigation, said is fair and just compensation, and much greater than is received by the Indiana Harbor Belt, a railroad-owned terminal, for an identical service. The record suggests many devices and practices which, while they may not all be strictly in violation of the Federal act to regulate commerce, nevertheless result in unfair advantages to the corporation. It is only fair to say that the officials of the trunk lines are not willing parties to these practices, but are either induced by self-interest or fear of loss of traffic to concede advantages or else are forced by reason of competitive conditions to make these concessions.

With respect to the strictly terminal lines owned by the corporation, a reference to the statistics in the record of these terminal lines will show that their business is almost entirely the business of the industry owning them, and they derive an immense revenue for handling their own traffic, which must necessarily yield to the owner a profit entirely out of proportion to the cost of performing the service. Here again the carriers have been struggling with the proposition of how to curtail the terminal road in its demand for divisions of rates.

Efforts have been made to ascertain from the various viewpoints as to how industrial-owned terminals should be treated. There is in the record the opinions of shippers, traffic experts, high railway officials and of the Interstate Commerce Commission, all of whom condemn the practice of making allowances to industrial-owned terminal roads and each of them suggest a separation of such interests.

It seems that there is necessity for a more definite rule of law to guide the Interstate Commerce Commission in determining how these roads shall be regarded and how they shall be treated.

Necessarily in this report it is impossible to set forth all the specific examples of the benefits derived by the corporation from its ownership and operation of transportation lines, or to point out all the possibilities for mischief which might accrue by reason of such control of lines, in view of its ability under the statute to control the routing of its shipments. The immense tonnages of the corporation running high into the millions and meaning vast sums of money to carriers, taken in connection with the power of the corporation to route such shipments and the fact that it owns railroads which may be beneficiaries of the power of the corporation to demand and receive percentages of rates, and through various other devices, is sufficient to indicate the great importance of this subject. The record is replete with positive affirmations of this character, as well as with suggestions from which inferences may be easily drawn.

It was also developed in the record that when Congress inserted the "commodities clause" in the act to regulate commerce it aimed only at one feature of the proposition. Though the statute seems to have miscarried, as it was formed it only forbade railroads from owning industrials. The record of this investigation suggests that when that statute is reconstructed it should likewise forbid an industrial from owning a railroad as far as Congress has power. The two branches of business are clearly distinct and, for the common good, should be entirely divorced each from the other. If there is any economic reason why an industrial should own a rail line, the benefits of which come to the industry by reason of such economy will be sufficient without making it allowances out of the rates of the regular carriers. This suggests that the difficulty has been in determining just what duty the carrier owes and, therefore, what it might be required to perform in connection with making deliveries to or receiving shipments from industrial plants. As far as it is possible under the Constitution this ought to be obviated by an amendment to the statute forbidding any industrial from receiving any part of a rate as compensation for any services performed by it.

> The suggestions herein are but another step toward the eradication of the evils which have grown up in transportation and as a result of our remarkable industrial development. That it is an evil seems to admit of no denial. The practice is complained against by all parties except the immediate beneficiaries thereof.

The evil effect of the ownership, operation, and manipulation of common carriers by industrial corporations has attracted the attention of the Interstate Commerce Commission. The fact that so many of the practices the commission unequivocally condemns are not at present specifically prohibited by law is in itself abundant proof that the laws regulating the operation of railroads by such concerns need immediate and radical revision. Says the commission:

> The evils most difficult to detect and to prove to-day are those arising out of the community of interest of certain carriers and industrial corporations. The ownership of industrial corporations by carriers and of carrier corporations by industrials is frequently taken advantage of to defeat that equality between shippers which the act contemplates. This is accomplished by

> unreasonable division of joint rates forced upon the carrier by powerful shippers who control industrial railroads. Such arrangements may be legal in form, although certainly illegal in effect. We find that a certain number of large industrial concerns control tracks and terminal facilities nominally owned by small railroad corporations which do not rise to the dignity of common carriers, but which are treated as such by the connecting carriers. As a result the connecting carriers make a switching allowance or a division of the joint rates to such terminal lines, which practice unquestionably results in the discrimination and places the industrial at an advantage in the market. Another form of discrimination is found in the leasing of property by carriers to shippers for a nominal consideration with a further agreement that all shipments made by the lessee shall be routed over the lines of the lessor, etc.

A thorough understanding of the inequitable advantages which accrue from industrials owning or operating common carriers over less fortunate competitors can be best understood by a study of concrete instances.

As has been shown, the great mass of available ore is found in the Lake Superior district and the greater part of this ore is taken from the Mesabi and Vermilion Ranges. The only outlet for this ore is over the Great Northern, the Duluth & Iron Range, and the Duluth & Missabe Railroads. The Duluth & Iron Range and the Duluth & Missabe are both the property of the United States Steel Corporation. The close relation previously existing between the Hill interests and the United States Steel Corporation has already been discussed at length. Until very recently the rate over all of these roads was 80 cents a ton. This ore is shipped from the docks at Superior, Two Harbors, and Duluth. The bulk of this ore is then transported from these docks by water to points commonly known as the lower lake ports—Conneaut, Erie, and Ashtabula. The ore destined for the Steel Corporation's mills is in the main transported by the Bessemer & Lake Erie. It will be seen that the corporation owns facilities for the transportation of its ore from the time it leaves the mine until it reaches the blast furnace.

The cost of transporting this ore over its own roads and steamships is, of course, not measured by any freight rate but by the actual expense incident to the operation, and where the corporation handles a like traffic for its competitors, an excessive charge is essentially a tribute levied upon those who are forced to make use of the transportation facilities of the Steel Corporation. The capitalization, operation, and profits of these roads are given in detail in statements made to the Interstate Commerce Commission. An inspection of these statements reveals the immense profits earned by these ore roads during the last ten years. These statements showing the capitalization, operating expenses, revenues, and income of the Duluth & Missabe, the Duluth & Iron Range, and the Pittsburg, Bessemer & Lake Erie Railroads are as follows:

Statement compiled from annual reports of Duluth, Missabe & Northern Ry. Co., 1911 to 1902.

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$4,112,500	$4,112,500	$4,112,500	$4,112,500
Funded debt outstanding at end of year	$13,101,000	$13,101,000	$13,101,000	$9,043,000
Single-track mileage owned at end of year, main line	186.84	168.86	168.86	168.86
Single-track mileage owned at end of year, branches and spurs	139.60	127.05	118.17	102.39
Total single-track mileage operated at end of year	328.34	297.81	288.93	273.15
Total operating revenues	$10,233,143.45	$14,055,994.68	$10,124,856.82	$9,389,135.93
Total operating expenses	$4,158,871.72	$4,231,965.54	$3,399,481.69	$3,542,634.40
Total net revenue	$6,074,271.73	$9,824,029.14	$6,725,375.13	$5,846,501.53
Net corporate income	$4,594,876.48	$8,494,097.56	$5,814,212.59	$5,023,286.30
Other disbursements from net corporate income	...	...	$90,845.34	...
Balance for year carried forward to credit of profit and loss	$4,594,876.48	$8,494,097.56	$5,723,367.25	$5,023,286.30
Dividends declared from surplus	$5,140,625.00	$9,870,000.00	$5,963,125.00	$4,523,750.00
Rate per cent of dividend	125	240	145	110

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$4,112,500	$4,112,500	$2,512,500	$2,512,500	$2,512,500	$2,512,500
Funded debt outstanding at end of year	$9,043,000	$9,043,000	$8,323,000	$8,323,000	$8,323,000	$8,323,000
Single-track mileage owned at end of year, main line	48.62	48.62	48.62	48.62	48.62	48.62
Single-track mileage owned at end of year, branches and spurs	195.95	190.19	132.35	120.94	112.71	102.33
Total single-track mileage operated at end of year	246.47	187.71	182.87	171.46	163.23	152.85
Total gross earnings from operation	$10,981,893.61	$8,368,489.01	$6,333,817.49	$3,701,416.85	$5,116,530.01	$3,755,416.21
Total operating expenses	$4,215,170.34	$2,977,746.83	$2,283,146.29	$1,836,484.51	$1,901,284.33	$1,476,525.30
Income from operation	$6,766,723.27	$5,390,742.18	$4,050,671.20	$1,864,932.34	$3,215,245.68	$2,278,890.91
Net income	$5,738,686.17	$4,291,706.36	$3,194,934.09	$1,142,431.66	$2,396,655.00	$1,489,283.44
Dividends	...	$3,403,750.00	...	$3,768,750.00	...	$1,507,500.00
Rate per cent of dividend	...	110 40	...	150.00	...	60.00
Surplus from operations of year	$5,738,686.17	$887,956.36	$3,194,934.09	$2,626,318.34	$2,396,655.00	$18,216.56

Statement compiled from annual reports of the Duluth & Iron Range R. R., 1911 to 1902.

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$3,000,000	$3,000,000	$3,000,000	$3,000,000
Funded debt outstanding at end of year	$13,151,000	$13,151,000	$13,151,000	$13,151,000
Single-track mileage owned at end of year, main line	190.88	168.45	167.78	167.78
Single-track mileage owned at end of year, branches and spurs	71.73	63.02	56.03	61.51
Total single-track mileage operated at end of year	263.41	232.27	224.61	230.09
Total operating revenues	$7,430,835.08	$9,597,773.83	$6,915,368.92	$6,267,821.48
Total operating expenses	$3,211,358.42	$3,540,742.42	$2,695,276.24	$2,765,252.10
Total net revenue	$4,219,476.66	$6,057,031.41	$4,220,092.68	$3,502,569.38
Net corporate income	$3,098,558.81	$4,438,651.04	$2,864,028.04	$2,284,645.42
Other disbursements from net corporate income	...	...	$76,051.41	$217,182.98
Balance for year carried forward to credit of profit and loss	$3,098,558.81	$4,438,651.04	$2,788,876.63	$2,067,462.44
Dividends declared from surplus	$4,050,000.00	$3,000,000.00	$4,350,000.00	$3,600,000.00
Rate per cent of dividend	135	100	145	120

Statement compiled from annual reports of the Duluth & Iron Range R. R., 1911 to 1902—Continued.

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000
Funded debt outstanding at end of year	$11,232,000	$11,232,000	$11,232,000	$11,232,000	$11,232,000	$11,232,000
Single-track mileage owned at end of year, main line	161.06	161.06	161.06	161.06	161.06	152.56
Single-track mileage owned at end of year, branches and spurs	49.20	50.63	49.77	49.77	48.48	57.39
Total single-track mileage operated at end of year	211.06	212.49	211.63	211.63	210.34	210.75
Total gross earnings from operation	$8,171,484.00	$7,757,635.88	$6,710,681.84	$4,033,215.83	$6,031,878.90	$5,934,868.25
Total operating expenses	$3,274,320.66	$2,575,317.07	$2,224,444.97	$1,839,014.81	$2,252,635.07	$2,155,234.49
Income from operation	$4,897,163.34	$5,182,318.81	$4,486,236.87	$2,164,201.02	$3,779,243.83	$3,779,633.76
New income	$3,435,897.33	$3,778,038.09	$3,169,333.11	$1,032,047.75	$2,566,170.55	$2,613,403.67
Dividends	....	$3,150,000.00	....	$4,500,000.00	....	$1,800,000.00
Rate per cent of dividend	....	105	....	150	....	60
Surplus from operations of year	$3,435,897.33	$628,038.09	$3,169,333.11	$3,467,952.25	$2,566,170.55	$813,403.67

Statement compiled from annual reports of the Bessemer & Lake Erie R. R. Co., 1911 to 1902.

Item.	1911	1910	1909	1908
Capital stock outstanding at end of year	$500,000	$500,000	$500,000	$500,000
Funded debt outstanding at end of year	$4,540,000	$4,030,000	$4,070,000	$3,530,000
Single-track mileage owned at end of year—main line	8.87	8.87	8.87	8.87
Total single-track mileage operated at end of year	212.54	213.41	210.05	210.05
Total operating revenues	$7,518,628.00	$7,888,021.31	$6,060,454.16	$5,352,043.36
Total operating expenses	$4,839,321.26	$4,159,663.80	$3,540,958.59	$3,223,926.93
Total net revenue	$2,679,306.74	$3,728,357.51	$2,519,495.57	$2,128,116.48
Net corporate income	$499,590.95	$1,672,529.99	$779,339.31	$404,189.53
Other disbursements from net corporate income	....	....	....	$630,000.00
Balance for year carried forward to credit of profit and loss	$499,590.95	$1,672,529.99	$779,339.31	$225,810.42
Dividends declared from surplus	$750,000.00	$750,000.00	$250,000.00	....
Rate per cent of dividend	150	150	50	....

Item.	1907	1906	1905	1904	1903	1902
Capital stock outstanding at end of year	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
Funded debt outstanding at end of year	$3,530,000	$2,430,000	$1,395,000	$1,370,000	$1,370,000	$1,000,000
Single-track mileage owned at end of year—main line	8.87	8.87	8.87	8.87	8.87	8.87
Total single-track mileage operated at end of year	210.05	210.50	212.90	244.28	240.94	235.60
Total gross earnings from operation	$6,399,323.16	$5,908,039.39	$5,123,951.28	$3,560,613.29	$4,273,064.88	$3,414,220.78
Total operating expenses	$3,341,622.80	$2,812,493.44	$2,438,376.88	$2,047,622.89	$2,479,976.56	$1,745,857.17
Income from operation	$3,057,700.36	$2,895,545.95	$2,685,574.40	$1,512,990.40	$1,793,088.32	$1,668,363.61
Net income	$500,903.03	$839,318.60	$948,472.81	$256,203.61	$252,242.41	$323,556.30
Dividends	$200,000.00	....	$250,000.00	$500,000.00	....	....
Rate per cent of dividend	40	....	50	100	....	....
Surplus from operations of year	$300,903.03	$839,318.60	$698,472.81	$243,796.39	$252,242.41	$323,556.30

It requires 2 tons of ore to make 1 ton of pig iron. Assuming that an independent concern located near Pittsburgh or compelled to ship its ore as far as Pittsburgh required 2 tons of ore from the Messabe Range, it would be compelled to pay for the transportation of that ore, first, 60 cents per ton from the mine to the dock. The cost of transporting this ore is 24 cents a ton (see Hearings, p. 4814). The difference between the cost of transporting the 2 tons of ore used by the Steel Corporation and the same amount by an independent concern would be 72 cents. This 72 cents is paid out of the pocket of the independent concern and *into that of the Steel Corporation,* and, as explained by Mr. Kennedy, an independent must for that reason, competing sharply with the Steel Corporation, produce his pig iron at $1.14 less per ton in order to equalize this difference in the freight rate.

For transporting this ore over its steamship lines, the Steel Corporation charges 60 cents per ton. The steamship company's profit on the transportation of this ore is 24½ cents per ton (Hearings, p. 4834), or 49 cents for the 2 tons.

At the lower lake ports there is a docking charge of from 17 to 25 cents, 12.7 of which is profit (see pp. 4841–4842 of Hearings). The bulk of this charge, however, is absorbed in other rates. The rate on ore from Conneaut to Pittsburgh is 96 cents per ton. The cost of transporting this ore, according to the testimony of Senator Oliver, who is thoroughly acquainted with the operations of this road, is 26 cents per ton. By a report made by the general manager of the Bessemer & Lake Erie for the year 1910 the average cost of transporting a ton of freight over that road was 30.94 cents (and over 60 per cent of all the freight on this road is ore transported from Conneaut to Pittsburgh), and the cost of transporting ore on the whole is much less than that of other freight. (See testimony of Freer, p. 4854.)

Thus it will be seen that there is a difference of not less than $3 per ton in the actual cost of assembling the ore required for one ton of pig iron at a blast furnace in Pittsburgh to the Steel Corporation and its competitor, to say nothing of any advantage that the Steel Corporation might possess by virtue of similar advantages in assembling the coke and limestone necessary to convert this ore into pig iron. This difference in the cost of transportation gives to the Steel Corporation a mastery over competitors who are not in the railroad and steamship business and the Steel Corporation is to-day the only manufacturer of iron and steel products which owns and operates an extensive railroad system.

An advantage of $3 a ton in the assembling of raw material is equal in many instances to the entire profit to the independent from the manufacture of steel in all its processes from the raw material to the finished product.

> For the last 10 years the net profits per ton of steel produced by the Steel Corporation have ranged between $10 and $16 per ton, the latter figure having been reached in the first few years of the company's existence. For the last year the net profit per ton has not been much over $12. On the basis of present prices the net is close to $11.
>
> While the net earnings per ton of steel produced by the Steel Corporation has ranged between $10 and $16 per ton, the independent steel companies have not fared so well. Several of the independents have not been able to show much over $4 per ton. The highest was approximately $7 per ton, by a small western independent company, whose properties represent actual cash paid in.

It is not maintained that the Steel Corporation should be required to transport freight for its competitors at actual cost. It is, however, of vital interest to know just what *is* the difference in the cost of transportation of raw material to this concern and to its competitors. That the rate is excessive there can be no doubt. The ratio of the operating expenses of the Duluth, Missabe & Northern in 1910 was 30 per cent, as against 66 per cent for all other roads, and that of the Duluth & Iron Range was only 26.5 per cent.

There is nothing in the physical conditions attending this traffic or in the character of the freight hauled to justify the rate charged. The Mesabi Range extends along a ridge or elevation about 900 feet above the level of Lake Superior, and on an average of 75 or 80 miles from it. The intervening territory forms a gradual incline to within a short distance of Lake Superior, where the fall becomes more abrupt, to within a few miles of the lake the grade is almost entirely with the load from the mines to the docks at Duluth, Two Harbors, and Superior, one engine hauling from 60 or 70 to as much as 120 cars. The great density of the traffic on these roads is the more extraordinary since they are operated only about six months in the year, approximately, during the season of open navigation on the lakes.

In 1910, the year mentioned by Mr. Freer in his testimony, the Duluth, Missabe & Northern Railroad transported 17,292,112 tons of ore (see Hearings, p. 4795); the Duluth & Iron Range transported 11,317,260 tons. (See Hearings, p. 4805.)

As will be seen from the accompanying table the cost of transporting this freight over the Duluth, Missabe & Northern was a little over $4,000,000, while the net revenue derived from the operation was exceeding $9,800,000, the road declaring a dividend of 240 per cent.

On the Duluth & Iron Range, the cost of transporting freight in 1910 was a little over $3,540,000, and the net revenue received from the operation over $6,000,000. This road declared dividends of 145, 100, and 135 per cent in the years 1909, 1910, and 1911, respectively. (Hearings, p. 4801.)

It is claimed that these roads are not capitalized at their actual value. The greater part of the Duluth, Missabe & Northern was constructed by the Merritt Bros. at a cost of a little over $600,000. Subsequently when owned and operated by the Lake Superior Consolidated Iron Mines, the cost of reconstructing it was estimated at $5,000,000. In the Hodge suit it was valued by Judge Reed at $8,000,000. It is not material to this discussion whether the road be worth $4,000,000, $8,000,000 or $20,000,000. In any case, the rates charged are manifestly exorbitant and the ratio of its earnings to its operating expenses is inordinately excessive.

The value which the United States Steel Corporation places upon its monopoly of transportation facilities between the Mesabi Range and lower Lake ports can to a degree be measured by the remarkable exchange of securities by which a one-sixth interest in the Oliver Iron Mining Co. was absorbed by the United States Steel Corporation. It will be remembered that the Carnegie Co. through this Oliver Iron Mining Co. had secured a 40-year contract with the Duluth & Iron Range Railroad by which it was to allow a rebate of 40 cents a ton on ores transported in certain amounts on its roads. Upon selling the five-sixths interest in this company, he (Mr. Oliver) took care to safeguard his own interest by a contract under which the Oliver furnaces were entitled to a one-sixth interest in all ore mined by the company. At this time the capital of the Oliver Iron Mining Co. was $1,200,000. (MacRae Rept., p. 2596.)

The Oliver Iron Mining Co. was the only concern in the United States entitled to ship vast quantities of ore from the Mesabi and Vermilion Ranges and to escape this tribute levied by the Steel Corporation upon all other carriers. It was entitled to one-sixth of all the ore mined by this company, and the Oliver Iron Mining Co. was only induced to abstain from the exercise of this precious privilege of sharing in the rich booty which the corporation anticipated from the control of this traffic by receiving $18,500,000 for securities of the par value of $421,700. (MacRae Rept., Exhibit 27.)

The advantage enjoyed by the steel corporation in assembling its raw materials is due in a great measure to its ownership of extended railroad systems and steamship lines, that in the delivery of its finished products is obtained both from its own roads and from other lines with which they make physical connection.

It is the custom among carriers to allow the road originating the freight a division of the amount charged for the through haul, out of all proportion to services rendered. Where the carrier and shipper have no interest in common and the through rate is reasonable, the manner of its division may be left to the discretion of the parties making it without detriment to the shipper or the public, but where the nominal carrier is the actual shipper, any injustice in the division of the rate operates as a discrimination in favor of the concern receiving it.

A terminal allowance is an arbitrary amount usually so much per ton, or car, paid the road handling freight at the point to which it was originally consigned. The United States Steel Corporation has incorporated the switches and rolling stock, used almost entirely for the transportation of its own freight and placed these roads upon the footing of common carriers. Such roads are aptly called "plant facilities," since their real function is to facilitate the delivery or the assembling of materials for the company operating them. The Union Railroad of Pittsburgh, the Lorrain Terminal, the old Chicago, Lake Shore & Eastern, and the Birmingham Southern, are all in fact "plant facilities." These roads connecting with the trunk lines and the shipper having the routing of immense tonnages over them, can, by means of such a device, play one road against another obtaining inequitable divisions of rates which are in effect rebates, and excessive terminal allowances in such amounts as to render competition impossible on the part of other concerns having no such devices for the evasion of the law or against the unjust discrimination in the making of freight rates.

Under ordinary conditions it is to the interest of the manufacturer to assemble his raw materials and to distribute his finished products at the lowest possible cost, and where he is not both the shipper and the carrier he will necessarily obtain this end by securing the lowest possible freight rate. Where, however, he is both the carrier and the shipper, the higher the rate the greater his profit, and since freight rates are never fixed by any one railroad and are, as established by evidence before this committee, the result of conferences between all the railroads in a given territory, the representative of a road owned by an industrial concern will always throw his moral influence, if not his vote, in favor of the highest rate obtainable. Such is the fixed policy of the United States Steel Corporation. Attention has already been called to the successful effort of the Steel Corporation to prevent any reduction in the rates upon scrap iron in a territory extending from New York to Chicago.

On April 10, 1901, Mr. Schwab, then president of the United States Steel Corporation, clearly stated the policy of the United States Steel Corporation in the matter of freight rates:

> The president (Mr. Schwab) in introducing this question made the following statements:
>
> "The railroad people are to have a meeting to decide the rate that they shall charge on ores from the Lake to the Valley and Pittsburgh and that the question is, ought we to insist upon the railroads giving us the lowest rate that we can get out of them

> or what ought to be our policy. The president thinks that we ought to consent to any ore rate that they may name for the benefit of the railroads provided they will give our companies equivalent values in the shipment on any other product."
>
> *Mr. Converse is of the opinion that it is far better to have a high rate, just as high as it can be,* if they will give us some definite and distinct rebate or preference in some other way. (Min. Ex. Com., April 10, 1901, MacRae Report, p. 3779.)

Through the ownership of the Elgin, Joliet & Eastern Railway the United States Steel Corporation enjoys a decided advantage over its competitors in the Chicago district. It gets liberal divisions of freight rates on all shipments originating in the mills at Gary, South Chicago, Joliet, and Waukegan, and is enabled because of the fact that this railroad is a recognized common carrier to make certain arrangements which are in effect rebates, and clearly devices for evading the law. For instance, on shipments originating in the Steel Corporation's mills located at Gary, South Chicago, and Waukegan, and billed to Missouri River points such as Kansas City and Omaha, the Elgin, Joliet & Eastern receives 20 per cent on the through rate; on business from these points to St. Louis, St. Paul, Minneapolis, and other Mississippi River points north of the Ohio River, it receives 25 per cent of the through rate and 15 per cent of the through rate on business from these points to New Orleans and Mobile (see Hearings, p. 4884). By reason of the tremendous volume of business handled by the Elgin, Joliet & Eastern and its enormous net earnings on the capital invested, this road is both the source of rich revenue and a powerful instrument for the oppression of competitors of the Steel Corporation in Chicago and western markets. In other words (see pp. 4857 to 4872, inclusive) the annual reports of the Elgin, Joliet & Eastern and its subsidiary, the Chicago Lake Shore & Eastern, show that the independent business of this road has increased to such an enormous extent since the formation of the Steel Corporation in 1901 that the business of the Steel Corporation, after the usual deduction for dividends, sinking fund, etc., is handled at a surprisingly small expense. The Steel Corporation being the originator of tremendous tonnage causes railroads, large and small, to seek its favor. Therefore these lines gladly throw business, such as switching, transfer, etc., to the Elgin, Joliet & Eastern in the hope of getting Steel Corporation business in return.

The rate quoted on shipments of rails from South Chicago to Jaudon, Mo., is a striking example of the method employed in securing concessions which are in fact rebates (see Hearings, p. 4905). Jaudon is a flag station located on the Kansas City Southern about 30 miles south of Kansas City. It is in no sense a delivery point. Rails shipped to Jaudon would not break bulk there but would be either returned to Kansas City or sent to some general distributing point.

The I. C. C. tariff No. 2527, effective June 10, 1911 (see Hearings, p. 4905), shows that on shipments of steel rails, steel crossties, and track fastenings, the rate of $2.75 is divided as follows:

The Elgin, Joliet & Eastern	$0.40
Chicago & Alton	1.10
Kansas City Southern	1.25

Mr. Freer (see Hearings, p. 4903) explains as follows:

> Mr. FREER. The regular divisions from South Chicago to Jaudon allow the Kansas City Southern 30 per cent of the through rate, which would be 82½ cents, and the balance up to Missouri River or Kansas City divides on the regular Kansas City percentages, which would allow the Elgin, Joliet & Eastern 25 per cent or 48 and a fraction cents. The Chicago & Alton would receive under the regular division $1.54 and a fraction. Now, under this special division basis, the Elgin, Joliet & Eastern receives 8 cents less than its regular division and the Chicago & Alton receives 44.4 cents less. The Kansas City Southern receives 42.5 cents in excess of its ordinary divisions.
>
> The CHAIRMAN. In the event that the Kansas City Southern were the consignee of its own rails, how much would it receive for hauling its rails the distance from Kansas City to Jaudon, Mo.?
>
> Mr. FREER. $1.25.
>
> The CHAIRMAN. It would receive $1.25 for hauling its own rails over its own track 33 miles?
>
> Mr. FREER. Yes, sir. (Hearings, p. 4903.)
>
> * * * * * * *
>
> Mr. FREER. There is nothing unusual at all about the rate. The only thing unusual is the fact that they have provided special divisions for it. On other traffic going into Jaudon, the Kansas City Southern would take 30 per cent of the rate from Chicago.
>
> * * * * * * *
>
> The CHAIRMAN. The effect of it is to give the rail maker at Gary a rate on rails, and have his rails shipped into Jaudon, Mo., at cost to the receiving carrier, with nothing else. He gets the benefit of it. The advantage of so much a ton to the consuming carrier, to the railroad that uses these rails to that railroad by this of 40 or 50 cents a ton.
>
> * * * * * * *
>
> Mr. BARTLETT. Taking it for granted that the steel corporation is the sole maker of rails at Joliet and Chicago and Gary, would that enable them to sell rails cheaper to the railroad?
>
> Mr. FREER. By the reduction of the price to the railroad it would, of course, induce the railroad to place the order there.
>
> Mr. BARTLETT. Why?
>
> Mr. FREER. Provided they could not get a similar advantage from other shipping points.
>
> Mr. BARTLETT. In what way would the purchaser of the rails get the advantage of such an arrangement as that?

> Mr. FREER. Simply by a reduction in the cost of the rails delivered to it at Kansas City. Of course, the rate to Kansas City is $2.75——
>
> Mr. BARTLETT. Yes.
>
> Mr. FREER. Now, this $2.75 rate from the mill applies to a point 30 miles beyond Kansas City.
>
> Mr. BARTLETT. Yes.
>
> Mr. FREER. Now, to the extent that they can get a proportion of that $2.75, the greater proportion that they can get out of that $2.75, the less the cost of delivery to them at Kansas City is. (Hearings, pp. 4906–4907.)

The real significance of this Jaudon rate in special division of course is that no other railroad could possibly receive rails at Jaudon except the Kansas City Southern, that the regular rate on rails, fastenings, etc., for Kansas City is $2.75 per ton. If rails, fastenings, etc., were billed to the Kansas City Southern at Kansas City, a 30-mile shorter haul than to Jaudon, that road would have had to pay the full $2.75 rate, which would have been divided exclusively between the Chicago & Alton and the Elgin, Joliet & Eastern. Under the special division, the Elgin, Joliet & Eastern (United States Steel Corporation road) forfeited only 15 cents of its usual division of 55 cents a ton, whereas the Chicago & Alton was forced to take $1.10 instead of $2.20, which it would have been entitled to on the shipment to the bona fide point, Kansas City.

A glaring instance of the advantage enjoyed by the United States Steel Corporation through the ownership of the Elgin, Joliet & Eastern and its subsidiary, the Chicago, Lake Shore & Eastern, is to be found in the allowance made by railroads over which coke and coal shipped from the Connellsville district to mills at Gary and South Chicago. Until a few years ago this allowance was 70 cents per ton (see hearings, p. 4883), and upon investigation by the Interstate Commerce Commission in 1903–4 this allowance was reduced to 40 cents per ton. Mr. Freer explains this as follows:

> Mr. FREER. At the time of this 70-cent allowance the rate on coke from the Connellsville district to South Chicago was $2.65, out of which the Chicago, Lake Shore & Eastern was allowed 70 cents, giving a net rate to the trunk line railroad of $1.95. Following this report of the commission the allowance to the Chicago, Lake Shore & Eastern was reduced to 40 cents, and the rate on furnace coke was reduced from $2.65 to $2.35; so that the $2.35, less the 40 cents reduced allowance, still left the trunk line with $1.95 per net ton on coke, the same as it had formerly received. (Hearings, p. 4883.)

It is significant that no complaint was filed in this case, and the investigation was made by the Interstate Commerce Commission upon its own initiative. For identically the same service, from the same points to the same points, and over identically the same number of miles of road, the Indiana Harbor Belt Railway Co. is allowed by the same railroads *10 cents* per ton instead of *40 cents per ton* allowed the corporation's road.

The Interstate Commerce Commission has justly complained of the great difficulty in solving the many intricate questions and preventing the continual injustice which arises from the cunning manipulation of terminal allowances and divisions of rates. As long as great manufacturing concerns are permitted to put a mere switch or system of switches, in many cases a few miles of railroad, located entirely upon their own property, on the footing of a common carrier, the abuses arising from the granting of division of rates and terminal allowances to mere plant facilities can never be adequately remedied.

A steel plant or any other manufacturing concern transporting its freight for a few miles over its own lines and by the use of its own engines and cars should put that freight into the channels of commerce upon the same footing identically as the man who tenders a single car of similar material, and the specific prohibition of any such allowances to a road owned by an industrial concern for freight of which it is the shipper as well as the carrier, is, in our opinion, the only adequate remedy for existing evils.

In the ownership and operation of common carriers is to be found the secret of both the Steel Corporation's profits and its power. This record abundantly establishes the fact that the actual cost of production between the United States Steel Corporation and other large concerns is practically the same, and yet the profits of the Steel Corporation infinitely exceed those of its competitors. The difference between these profits is in the main obtained by advantageous freight rates. This is, in fact, admitted by Judge Gary, and so capable a judge as Julian Kennedy expresses the opinion that the ownership of common carriers gives to the Steel Corporation the power of life and death over all its competitors.

The CHAIRMAN. Mr. Kennedy, have you anything further to say?

Mr. KENNEDY. There was one statement I wanted to make as bearing on this matter of transportation, that occurs to me in looking over the history of the case. There is a statement here of Mr. Gary having testified December 18, 1908, and in answer to the question as to whether he could put the price down and put other people out of business, Mr. Gary said:

"Quite likely; that may be true. I will not say that it is not true. I will not say that in the competition we could not drive a good many of our competitors out of the business.

"Mr. CLARK. Now, another thing.

"Mr. GARY. It is not because of a hold on the market.

"Mr. CLARK. What is it, then?

"Mr. GARY. It is because of our ability to produce cheaper and because of our ownership in the independent concerns, such as the railroads, the steamship lines, etc., which gives a large credit from the United States Steel Corporation's standpoint."

Showing that transportation lines, in Mr. Gary's opinion, are important factors.

Mr. BARTLETT. That is from the tariff hearings in 1908?

Mr. KENNEDY. Yes, sir:

The CHAIRMAN. As I understand it, you are of the opinion, if by any method we could force the common carriers of the country to treat all industrials exactly alike, the advantage of the Steel Corporation over its competitors would be practically eliminated?

Mr. KENNEDY. To a great extent. I think Mr. Gary has always been very reasonable and very honest to his competitors, but some other man in the future, some other king might rise who knew not Joseph, and it would really be better that no one company has as large an inside hold on the others.

The CHAIRMAN. If the Steel Corporation chose to do it, with its present weapons, could it destroy its competitors?

Mr. KENNEDY. I think it could; yes. (Hearings, pp. 5176–5177.)

POLITICAL ACTIVITIES OF THE UNITED STATES STEEL CORPORATION.

An import duty imposed primarily for the purpose of protection has hitherto been defended either on the ground that it fosters infant industries or protects American labor. The United States Steel Corporation is not entitled to the imposition of any such duties for either reason. As has been shown, this corporation has rendered infant or new industry in the steel business impossible by its control of ore-producing and transportation facilities, and the bulk of its labor is essentially foreign in every respect except that it temporarily abides in this country while in the employ of the Steel Corporation. The corporation, nevertheless, has been keenly alive to the advantages accruing from the elimination of foreign competition by high or prohibitive duties, and it has been generous in its assistance and ardent in its encouragement of those whom it believed most inclined to impose or to maintain such duties, as is evidenced by the following correspondence:

PHILADELPHIA, PA., *September 19, 1904.*

UNITED STATES STEEL CORPORATION.

MY DEAR SIRS: I inclose herewith the Republican national committee's receipt for your subscription to the campaign fund.

Respectfully, yours,

E. T. STOTESBURY,
Chairman.

[Inclosure.]

REPUBLICAN NATIONAL COMMITTEE,
Madison Square, New York, September 17, 1904.

Received from United States Steel, $10,000.

C. H. DUEL,
Assistant Treasurer.

(Press of 40 Nassau Street.)

NOTE. E. T. Stotesbury is a member of the firm of J. P. Morgan & Co.

(MacRae's report, p. 3733.)

On September 17, 1911, at a meeting of the finance committee, at which J. P. Morgan, jr., George W. Perkins, and other members of the finance committee were present

> The chairman presented a letter addressed to him by James M. Swank, under date of January 12, urging the contribution of $4,000 toward the $9,000 to pay the expenses of a second edition of a book entitled "Protection and Prosperity," written by Hon. George B. Curtiss, Binghamton, N. Y.
>
> On motion and by an affirmative vote of all present, the question was referred to the chairman, with power. (Minutes, finance committee, Jan. 17, 1911, MacRae's report, p. 3879).

The letter referred to was written by Mr. James M. Swank to Judge Gary, and is as follows:

PHILADELPHIA, *January 12, 1911.*

Hon. E. H. GARY,
Chairman United States Steel Corporation,
71 Broadway, New York.

DEAR JUDGE: I have waited until you could have your meeting with the steel manufacturers off your mind before writing to you about an important matter which has been on my mind for several weeks. In November last, after the election was over, I received a call from the Hon. George B. Curtiss, of Binghamton, N. Y., a lawyer, like yourself, United States district attorney, and the author of Protection and Prosperity, the most valuable contribution to the world's tariff history that has ever been written. I send you a copy of the book by express to-day and hope that you can find time to examine it. Mr. Curtiss called to urge our association to assist him in publishing a second edition of his book; this time in two volumes. He said, which I myself also firmly believe, that our protective policy, upon which the whole prosperity of the country rests, is in danger of going down to defeat if extraordinary efforts are not now made to educate the people to sustain it, and particularly the leaders of the Republican Party. This can be done only through the liberal use of printer's ink in books, newspapers, and magazines, the lack of which liberal use in recent years is one leading cause of the demoralized state of the public mind to-day on the tariff question, another cause being the evil influence of men who have been elected or appointed to high office as protectionists, but who are at heart free traders so far as free trade is possible in this country.

Mr. Curtiss said that he has already revised Protection and Prosperity, which was published in 1896, bringing down to the present time all essential details of tariff legislation in Great Britain, Germany, and the United States, particularly in our own country. As his book is really a cyclopedia, his thought was that the new edition should be placed in the hands of every Senator and Representative in the new Congress and as a book of reference for professors and students in our colleges and universities; also in the offices of leading newspapers. An estimate of the cost of a new edition of 3,000 sets (in two volumes) will be found in a letter to me, which I requested him to write, and a copy of which you will find inclosed. Please notice that Mr. Curtiss asks and expects no reward for the labor he has expended or may expend in the preparation of a new edition. His work upon it would be a labor of love entirely. He could have everything in readiness for the publication of a new edition early in the coming summer.

In my interview with Mr. Curtiss in November I frankly told him that I could not guarantee the payment of the $8,000 that would be necessary to publish the 3,000 copies of his book; that we had no fund that we could draw upon for this purpose. He suggested that I submit the matter to a few of the leading members of our association, which I promised to do, but I said that I could not do this immediately. It so happened that Mr. Curtiss was again in town last week on professional business and called to see me. He is a gentleman of very great ability. I wish that you could see him.

The history of this association from the beginning has always embraced the care of our tariff interests. Until the death of Mr. Wharton and my own hospital experience we both gave our personal attention to Washington affairs. For many years we compiled and printed tracts which were systematically distributed in all States that were doubtful on the tariff question. We encouraged the preparation of textbooks dealing with the doctrine of protection and have paid for their publication—books by Henry C. Carey, Judge Kelley, Dr. William Elder, Prof. Van Buren Denslow, Prof. R. E. Thompson, David H. Mason, Giles B. Stebbins, and Gov. Henry M. Hoyt. These books we placed in libraries and sent to Congress. Of course, all the work I have mentioned costs many thousands of dollars, but this work, in conjunction with that done by other trade organizations, has kept our protective policy practically unharmed to the present time. We had in our association for many years what was called a tariff fund. We have had no such fund for a number of years, else I would not have brought to your attention the special work done for me by Speaker Reed and the needs of the Home Market Club.

A protective tariff or a virtual free-trade tariff is the issue to be settled in 1912. I suppose it is useless to take any steps to prevent the present Tariff Board from being made a permanent tariff commission, but we do not want its recommendations or conclusions looking toward free trade to be approved by Congress or to be embodied in the Republican national platform of

> 1912. Even if the duties on iron and steel could be further reduced without serious injury to our iron and steel industries so far as prices and foreign competition are concerned, the iron trade of the country could not be prosperous if serious injury should be done to other industries through tariff reductions. Our iron and steel manufacturers must have a prosperous country to insure them an active home market for their products. Of course, you all know this. I mention this partly because in 38 years spent in this office I have many times witnessed the disastrous effects upon the iron trade of low duties or the efforts of our enemies to enact them.
>
> This is already a longer letter than I intended to write. What I would like to have you do is to ask your finance committee to approve a contribution of $4,000 toward the publication of Mr. Curtiss's two volumes. If the committee will do this, I will ask the following companies to contribute $1,000 each: Republic, Pennsylvania, Lackawanna, Jones & Laughlin, and Cambria, making altogether $9,000. This is $1,000 more than the $8,000 mentioned, but the packing, expressage, etc., on 3,000 sets of two volumes each would cost a large sum, all to be accounted for, of course. All checks to Mr. Curtiss when the books are ready for distribution. There is no immediate hurry for an early reply, but an early reply would be appreciated.
>
> Very truly, yours,
>
> JAMES M. SWANK.

(MacRae's report, p. 4388.)

Mr. George B. Curtiss, the author of this publication, describes its character and purport as follows:

> BINGHAMTON, N. Y., *November 21, 1910.*
>
> I propose to bring out a new edition in two volumes of about 700 pages each of Protection and Prosperity, volume 1 to be devoted to the tariff question of the United Kingdom and other foreign countries; volume 2 to a discussion and history of the tariff question in the United States from the beginning of the colonial period to the present time. The present edition, which was published in the spring of 1896, brought the history of the question down to about the 1st of January, 1895. In the new edition I propose bringing the history of England and other foreign countries down to the present time. My treatment of the question so far as it relates to the United States begins at page 564 and was made very brief for several reasons, the principal one being lack of time, in order to get the book on the market in the spring of 1896. This part I have revised, beginning with the colonial settlements, thoroughly treating our industrial developments from the earliest time to the formation of the Government, which will be a new and valuable contribution to the literature on the subject. I have entirely rewritten the subject from the formation of the Government to 1860. This will give a new and, I think, the most valuable exposition of the early tariff history of this country to be found anywhere.
>
> I propose bringing the treatment of the subject from 1895 down to the present time, completing the discussion with the disastrous effects of the Gorman-Wilson bill and amplifying very

> fully our amazing industrial growth and prosperity under the Dingley bill, and also explain fully the Dingley and Payne-Aldrich bills, and conclude with a specific answer to the criticisms which are now being urged against our tariff policy, and a specific defense of the principal industries of the country which are now threatened with attack. I believe that the new edition when completed will be in every respect more satisfactory than the old one and will be approved by the manufacturing interests of the country.
>
> The present edition occupied my time and thought for more than 16 years—as much of it as I could spare from the necessary demands of my profession. I believe that the country is now confronted with a reopening of the question, and a campaign of education after the old fashion must be instituted to save the country from the disasters which are sure to follow a downward revision of the tariff.
>
> Since talking with you I have had a rough estimate made of what it will cost in cash to bring out a new edition of 3,000 sets of two volumes each, and find that it will probably require an expenditure of about $8,000. I think this sum would safely cover it. This, of course, means good binding and a handsome edition. My idea is that the parties who advance the money to get out this edition are to take the edition and present it to libraries and such persons as they believe would do the most good with the book. The plates and copyright are to belong to me.
>
> Very respectfully, GEO. B. CURTISS.

(MacRae's Report, p. 4389.)

This policy of encouraging the advocates of a highly protective policy is reflected in the attitude of Mr. Bope, the general manager of sales and the successor of Mr. Charles M. Schwab in the arrangement of prices with the various pooling associations. The efforts to reduce the schedule of the Payne-Aldrich tariff bill seem to have caused the corporation considerable concern, as indicated in the following statement taken from the minutes of the Carnegie Steel Co. under date of June 7, 1909.

> JUNE 7, 1909.
>
> ALDRICH BILL.
>
> Mr. BOPE. I found in discussing matters with various people during the week that one unsettling condition is the action of the Senate in pushing through the Aldrich bill, because the people have been expecting some reasonable reductions. The so-called reformers undoubtedly have had the best of the argument right along, but the supporters of the bill have had the strength to go right ahead, and they have done so regardless of protest, and this is beginning to leave a sort of bad taste in the mouth of the people. While no changes could be made in the bill if put through in its present shape for practically three years, it is felt that if this is done and the Democrats have a majority next year, they will make a start for revising the tariff again. All that is wanted is such reductions as will keep the

> question of the tariff out of the way for several years, because it is believed that once we get fairly started in this buying movement it is going to last several years, and we do not want such influence as another revision of the tariff to come up during this time. (MacRae's Rept., p. 4092.)
>
> On December 7, 1909, Bope, the sales agent of the Steel Corporation, seems to have still been in close touch with the tariff situation. "I had a talk on Friday last," said Mr. Bope, "with a party who had just returned from Washington and who is in pretty close touch with the tariff situation, and he said he has no doubt but that there will be some reduction made in the steel schedules, and it is possible it will be as much as 50 per cent, although on account of the harm this would do the independent manufacturers, and this feature has been strongly placed before the committee, it may not be so great." (Minutes, Carnegie Steel Co., Dec. 7, 1908, MacRae's Rept., p. 4087.)

It appears that other large concerns were in thorough accord with the United States Steel Corporation in its attitude in this matter, since Mr. Bope says that after a study of the "drift," he finds "other interests of the country" were demanding the same thing. The employees of the Steel Corporation were thoroughly canvassed to ascertain their attitude in the matter.

OCTOBER 12, 1908.

POLITICAL SITUATION.

> Mr. BOPE. With regard to the political situation, after talking with our agents, who were all here during the week, I can not help but feel that the drift has now set in steadily for Taft, not on his own account, but simply because business men are beginning not only to think but to talk, that the interests of the country demand his election, and that if the tariff must be revised it had better be done by the Republican than the Democratic Party. When in New York last week, those whom I talked with seemed very confident that Taft will carry the State by at least 50,000, but thought that Hughes is going to be defeated. A canvass made of our own works in this district last week shows a little better condition than I had really expected would be found; that on an average about 75 per cent of the men in our employ are for Taft, although at some of the mills as much as 50 per cent of the men are talking blind. There is no question but that he is stronger among the workingmen this year than in any of his previous campaigns; but he is not so strong among the conservative business men. I figure, however, that if other wage-employing localities are affected to the same extent as we find conditions here, it will likely result in some of the doubtful States going Democratic. But with the efforts that are making now for a strong finish to the campaign I believe that Taft is going to win out. (MacRae's Report, p. 4086.)
>
> Mr. BOPE. * * * The political situation is holding matters a little; people waiting not because they have any doubt about Bryan's nomination, but to see what the Democratic platform is going to be. If very radical, it will stop things perhaps for a

> couple of weeks until it can be digested; but people will not hold off everything, because they are anxious to go ahead. After this is out of the way and the campaign really begins, I believe that the sentiment will be so strongly in favor of Taft that it will carry business along with it just as it did in 1896. (Minutes, Carnegie Steel Co., July 6, 1908, MacRae's Report, pp. 4084-4085.)
>
> Mr. BOPE. * * * The political situation, I believe, is going to settle itself reasonably quick if we can get the mills in operation, for this is necessary. I think it is going to be put before the people in the light that the Presidency is the biggest job in the country for which two men have applied, and from a business standpoint the one best equipped to do it should be elected, and if looked upon in this way the drift will be toward Taft very early in the campaign. (Minutes Carnegie Steel Co., July 13, 1908, MacRae's Report, p. 4085).

Efforts to enforce the Sherman Antitrust Act appear to have caused equal solicitude with the reduction of the tariff. On January 4, 1909, at a meeting of the board of directors of the Carnegie Steel Co., Mr. Bope said:

> Mr. BOPE. * * * The whole outlook, in fact, appears to us to be distinctly better. The only two clouds that we can see now are the tariff and the Sherman Antitrust Act. The passage of the emergency currency bill last spring, while not used, is a safeguard to this extent and has strengthened the financial situation, but this question ought to be put in such shape that it will not be possible again to have a condition similar to that which obtained in the fall of 1907, and I have no doubt this will be done. Other drawbacks have been disappearing until there is left only the two mentioned, and we are in shape now to go ahead. There is getting to be a feeling among the trade, though I do not know where it emanated, that the reduction in the steel schedules in the new tariff is not going to be as great as some people have anticipated and, furthermore, that the business situation is going to be strong enough by the middle of the year to overcome anything that might occur in this direction. (Minutes Carnegie Steel Co., MacRae's Report, p. 4087.)

In the event of any investigation following the enforcement of this act the general sales agent of the Steel Corporation expressed a decided preference among investigators.

> Mr. BOPE. * * * A number of other very important matters came up during the week, which developed later, so there does not seem to be a great deal of lack of confidence in the future among the buyers. They seem to feel that things will come out all right in the end, and with the adjournment of Congress I believe business will go right along. These investigations have naturally caused a little doubt in the minds of men as to just what is going to happen. We are going into a new era, and, like every case of that sort where men can not see what is ahead of them, they hesitate a little. The same conditions prevailed six or seven years ago, when the large combinations of capital began to be formed which marked a new era in the industrial world.

> These things were a benefit at the time and are a benefit to-day, yet on account of the abuses which some of them have undoubtedly been guilty of we will have to figure that there will have to be some sort of control or regulation, and we will have to take it and make the best of it, and I do not know but what it will be better to have these things done by Republicans than by Democrats. A great many people fear this agitation may cause the election of a Democratic Congress this fall, and I believe legislation of this kind would have a worse effect upon business if enacted by a Democratic than by a Republican Congress. I wanted to mention these things because they are actually occurring and are having some effect upon commercial conditions. (Minutes Carnegie Steel Co., MacRae's Report, p. 4078.)

It appears that with the exception of rails and armor plate, steel manufacturers have not yet been able to render effective any agreement international in its scope, limiting output or fixing prices. No such contracts affecting the operations of American steel mills alone and raising the price to the domestic consumer above the cost to the foreign purchaser could be made effective without the aid of the Federal Government in excluding foreign competition or penalizing it by heavy import duties.

By agreement among themselves steel manufacturers have often been able to establish and to increase the price in the home market. Such agreements would have been to a great extent abortive had the consumer of such articles been permitted to procure them in an open and competitive market where the price was not determined either by agreement between a number of small manufacturers or by the inordinate power of a single monopoly. In such cases the producer is clearly entitled to the benefit of competition from abroad, competition at home having been restrained or destroyed by the wrongful act of the domestic manufacturer, and any legislation which renders effective the making of such combinations in restraint of trade or the creation of such monopolies is manifestly indefensible. No monopoly and no combination or conspiracy between monopolies limiting output or fixing prices not international in scope could ever seriously affect consumers if the opportunity was still left open to procure at a fair price in some other market not thus manipulated or controlled the commodities affected by such combinations among domestic producers.

In such a case the power of a domestic monopoly to practice extortion upon the public is directly dependent upon ancillary legislation excluding competition from abroad after it has been successfully destroyed at home. The difference between the cost of such commodities in the domestic and foreign market is the measure of the injury inflicted upon the consumer and of the advantage obtained by the domestic monopoly.

On page 1770 of the hearings are produced tables furnished by the corporation showing the price of the various articles manufactured by it and intended for foreign consumption. By a comparison of the prices given in this list with the cost of the same articles offered for sale at the mills of the corporation it can easily be ascertained to what extent the cost of steel and iron products sold in the home markets have been enhanced by highly protective or prohibitive duties.

> It has been pretty well known in steel circles that the Steel Corporation's export prices have been almost uniformly lower than the domestic prices, but some of the concessions made to foreign consumers shown in the comparison are surprisingly large. In 1906, for instance, there was a spread between the average domestic f. o. b. price of structural shapes and the corporation's f. o. b. export price of nearly $9. In 1908 there was a spread in the case of plates of $7, and in 1909 rails were sold abroad on an average of $4 a ton less than at home. The biggest difference is in tin plates, in which the Steel Corporation has been for years in sharp competition with the Welsh makers. There was in 1906 a difference of nearly $19 a ton, and in 1910 there was a difference of about $12.50 a ton. A possible explanation of this is that the duty on tin plates is very high, now amounting to 1.2 cents per pound, or $26.88 per gross ton, as compared with $3.92 for steel rails.
>
> The differences referred to above are shown in the following tables, which compare the average mill prices f. o. b. of some of the principal products exported by the United States Steel Corporation since 1906 with the average f. o. b. Pennsylvania mill domestic prices, as reported by the American Iron & Steel Association.

	Average domestic price per gross ton.	Average United States steel export price per gross ton.	Difference per gross ton.[1]
Rails:			
1906	$28.00	$24.42	−$3.58
1907	28.00	28.29	+ .29
1908	28.00	25.80	− 2.20
1909	28.00	23.94	− 4.06
1910	28.00	24.16	− 3.84
Plates:			
1906	35.84	29.84	− 6.00
1907	38.08	33.17	− 4.91
1908	36.84	29.84	− 7.00
1909	31.70	27.50	− 4.20
1910	32.97	29.04	− 3.93
Structural shapes:			
1906	38.48	29.58	− 8.90
1907	38.48	32.48	− 6.00
1908	36.74	29.50	− 7.34
1909	31.58	27.37	− 4.21
1910	32.92	28.42	− 4.50
Wire nails:[2]			
1906	37.20	39.10	+ 1.90
1907	40.20	45.46	+ 5.26
1908	39.80	40.26	+ .46
1909	36.40	37.92	+ 1.52
1910	35.00	37.37	+ 2.37
Tin plates:[3]			
1906	3.69	2.85	−18.91
1907	3.90	3.40	−11.29
1908	3.70	2.98	−16.12
1909	3.50	2.85	−14.56
1910	3.60	3.04	−12.56

[1] − = decrease; + = increase.

[2] Per net ton.

[3] Per 100-pound box.

The United States Steel Corporation's export tonnage in 1910 was the largest on record, amounting to 1,216,057 tons, and the value, as calculated from the corporation's statement, was over $41,500,000. The following table, for the year 1910 only, shows the export shipments and the total f. o. b. mill price received by the Steel Corporation, with the exception of 46,096 tons of miscellaneous products for which prices were not given:

	Tons	Total price received.
Steel rails.......gross tons..	271,233	$6,688,606
Billets, blooms, slabs, sheet, bars, and skelp.......do....	92,043	2,040,593
Plates.......do....	105,875	3,074,610
Structural shapes.......do....	93,325	2,652,268
Merchant bars, bands, etc.......do....	88,966	2,707,235
Hoops and cotton ties.......do....	13,344	457,432
Spliced bars, rail joints, etc.......do....	[illegible] 046	589,691
Wrought pipe.......do....	109,[illegible]03	5,674,997
Tin plate.......base boxes..	393,012	1,194,639
Sheets.......gross tons..	116,622	6,706,931
Rods.......do....	23,029	669,914
Coarse wire.......net tons..	18,667	617,504
Wire nails and staples.......do....	57,178	2,136,642
Wire, tinned and coated.......do....	62,466	2,443,045
Wire, barbed and galvanized, twisted.......do....	78,869	3,643,537
Wire fence and netting.......do....	5,551	290,206
Total.......	1,169,961	41,586,950

(Hearings, p. 5135–5136.)

ABSORPTION TENNESSEE COAL & IRON CO.

After acquiring the control of the Lake Superior ores, the Steel Corporation made extended researches and explorations of the ore deposits of Cuba, North and South America.

Mr. REED. May I suggest a question at that point?

Mr. YOUNG. Certainly.

Mr. REED. In regard to these ores in Utah, Cuba, and Brazil, perhaps Mr. Cole could tell us whether the Steel Corporation ever made any effort to acquire ores or to control or get a large part of those ore beds.

Mr. YOUNG. Yes. Do you know anything about that, Mr. Cole?

Mr. COLE. The Steel Corporation through its subsidiary, the Oliver Iron Mining Co., had examinations of ore beds in Utah made, but did not feel justified at this time in buying any at that point. They also had made an examination of the ore beds in Brazil, but did not make any investments there at the time. They have secured some ore in Cuba, but just what tonnage I am unable to say.

Mr. REED. Relatively small, is it not? (Hearings, pp. 5483–5484.)

* * * * * * *

The CHAIRMAN. You spoke of having your engineers go over the country and make a thorough survey of the various ore deposits of New Mexico, Utah, Texas, New York, in the Appalachian region, and elsewhere, and in California. How much ore

> did they lease or purchase outright after these investigations for the Steel Corporation? How much ore did it obtain as a result of these investigations?
>
> Mr. COLE. They did not secure any ore in the districts referred to.
>
> The CHAIRMAN. Why was it they did not?
>
> Mr. COLE. I presume they felt it would be some time in the future before those ores would be available for manufacture.
>
> The CHAIRMAN. Those ores, as I understand, as Mr. Sellwood has said, either by virtue of their low degree of ore, the presence of silica, the absence of a market, or the remoteness of the materials to flux them rendered them unavailable at the present time?
>
> Mr. COLE. Yes, sir.
>
> The CHAIRMAN. Or in the immediate future?
>
> Mr. COLE. In the immediate future. (Hearings, p. 5494.)

The only large deposits of ore at present available for the making and marketing of pig iron and steel in large quantities and at a profit are found in the Lake Superior and Birmingham districts.

> The CHAIRMAN. Where are the principal ore bodies, workable ores, in the United States? * * * Such ores as can be worked at a profit?
>
> Mr. PERIN. The two great ore bodies, of course, are those in the Mesabi Range, and in the Gogebic and the Marquette and Menominee Ranges, and next in importance in volume of tonnage would be those in the Alabama district, directly in proximity to Birmingham.
>
> The CHAIRMAN. The two great ore bodies are those of the Lake Superior region——.
>
> Mr. PERIN (interposing). And the Birmingham (Ala.) region.
>
> The CHAIRMAN. Are there any other large ore bodies which are or can be worked, from which pig iron can be made at a profit in competition with these two ore bodies which you have mentioned?
>
> Mr. PERIN. Which can be marketed? I do not think so. At a higher market and as the metallurgic art advances the ores of the Adirondack and other regions will become important factors in the production of pig iron. (Hearings, p. 972.)

At the formation of the Steel Corporation the ores of this region seem to have been disregarded, since they were all non-Bessemer, that is, contained exceeding 4 per cent of phosphorus, which prevented their use in a Bessemer converter, and prior to 1906 steel rails were made from Bessemer steel only.

It is only in recent years that the use of steel made from non-Bessemer ores has approached Bessemer steel either in the quantity produced or in the variety of finished materials for which it could be rendered available.

A brief review of the two processes by which pig iron is converted into steel is necessary to a clear apprehension of the vast and vital change which the gradual substitution of the "basic" or "open-hearth process" for the old "Bessemer process" has wrought in the whole status of the steel industry and the relative value of iron ores in this country.

> Mr. ROBERTS. The Bessemer process as known and called such is by blowing compressed air through molten pig iron in what is known as a converter. By the blowing through of that air the carbon is eliminated by the oxygen of the air and forms carbon oxide, which burns to carbonic-acid gas. That then becomes steel and is poured into the ingots. The open-hearth process was known as the Seaman's furnace, a reverberatory furnace with gas fuel. The coal is charred in a producer, which forms gas, is then carried to the furnace, which is on regenerative principles, and the flame passes over the bed of the furnace, the open hearth of the furnace, on which either liquid pig iron or cold pig iron is put, melted, and the carbon removed from the pig iron by the contact of the oxygen with the flame passing over it. The lining of the furnace, what is known as the basic furnace, is composed of bases instead of acids. The original form of the open-hearth process was acid and was made in a furnace lined with sand or silica, whereas the basic furnace is lined with a base such as alum or magnesia. This enables the introduction of basic material, such as limestone, which has an affinity for phosphorus, and eliminates the phosphorus from the pig iron, whereas in the Bessemer process by simply passing air through the pig iron in an acid-lined converter you do not eliminate the phosphorus. I would say that it is a more expensive process to operate an open hearth than it is a Bessemer, due to the fact that in one case your fuel is air and in the other case your fuel is coal. You can not make open-hearth steel as cheaply as you can make Bessemer steel.
>
> Mr. BARTLETT. What is the advantage of the one over the other, if any?
>
> Mr. ROBERTS. You have the opportunity of using all grades of ore in the open hearth, whereas in the Bessemer you are limited to certain special ores which contain a small content of phosphorus. (Hearings, p. 360.)
>
> * * * * * * *
>
> Mr. ROBERTS. * * * Basic open-hearth steel admits of the use of any quality of ore irrespective of its phosphorous content, whereas Bessemer steel requires an ore with a low phosphorous content, probably not over 0.04, due to the fact that phosphorus in the Bessemer process is not eliminated; but in the basic open-hearth process it makes no difference how much phosphorus you have, because you eliminate it in the process of making your steel. Consequently these plants which originally produced Bessemer steel, *due to the fact that the basic open-hearth process was not known at that time and not operated*, have now gradually, due to the gradual extension of the Bessemer, or low-phosphorus ores, been compelled to turn over to the manufacture of open-hearth basic rails. *The plant at Gary is arranged as an open-hearth basic plant entirely. They have no Bessemer plant.* And some of the Pittsburgh plants are using the basic open-hearth process. The others are using both, as they see fit.

> Mr. GARDNER. Has it been an expensive matter to convert the plants of those companies so that they can use this basic open-hearth process instead of the Bessemer process?
>
> Mr. ROBERTS. Yes. It means the abandonment of their Bessemer plant, putting it in the scrap heap. The value of all the capital invested in the Bessemer plant disappears and whatever the cost of the open-hearth plant is must be added to their capital charges. (Hearings, pp. 359–360.)

By the partial locking up of the ore reserves of Lake Superior and by the exaction of an onerous tribute for their transportation, the Steel Corporation unwittingly stimulated the development of the open-hearth process and offered a strong inducement to the bold capitalist and the inventive genius to discover new forms and uses to which it could be applied.

> "The growth of basic steel," says Mr. Topping, president of the Republic Iron & Steel Co., "is not necessarily all due to the superior quality of that steel for certain purposes over Bessemer, but is due more largely, in my judgment, *to the limited supply of Bessemer ores and to the constantly increasing demands for steel in various forms;* and the basic-steel process has made available a large amount of ore that otherwise would not have been available, and which, had it not been for the basic process, would not have enabled us to meet this great demand for steel everywhere. There is also, in addition to the reason I have just cited, a demand for a quantity which calls for basic exclusively, on account of specifications and restrictions placed by certain engineers for roads and structural material, that is all basic necessarily for quality reasons."
>
> The CHAIRMAN. What are the advantages of this steel made by the open-hearth process?
>
> Mr. TOPPING. Well, the general advantage is in this, that you can not reduce by the Bessemer process phosphorus below the percentage at which you start in on the ore; in fact, you pick up added quantities of phosphorus in the process of manufacturing with limestone and coke, whereas in the basic process it is only a question of time when you can eliminate substantially all the phosphorus; and by the basic process you get a more regular steel and better quality, due to the fact that phosphorus is not an element that adds to the quality, but the reverse of that in its general influence. It makes it brittle. (Hearings, p. 1234.)

Mr. Roberts, a learned and skillful engineer, speaks of the manufacture of rails from Bessemer steel by the corporation to within the last two or three years as "due to the fact that the basic open-hearth process was not known at the time and not operated." Strictly speaking, while known, it was not developed until recent years to such an extent as to enable steel made by this process to compete with the product of the Bessemer converter. This gradual revolution in the process of manufacture has been due to the rise in price of the corporation's Bessemer ores, the development of the open-hearth furnace, and the consequent cheapening of steel produced by that process.

Statistics compiled by the American Iron & Steel Association show that a small amount of open-hearth ingots and castings were made as far back as 1869. In recent years the substitution of basic for Bessemer steel has been phenomenal. In 1894 there were produced in the United States 3,571,313 tons of Bessemer ingots and castings, as against 784,936 tons of open hearth. Two years later, the production of Bessemer steel showing no material change, open-hearth ingots and castings increased nearly 200 per cent, viz, 1,298,700 tons, and by 1898 this amount had again been practically doubled—2,230,292 tons.

At the time of the formation of the Steel Corporation the total production of Bessemer and open-hearth steel, from the date of the introduction of the basic process into this country (1869), was 75,366,329 tons and 18,029,741 tons, respectively, while from the time of the formation of the Steel Corporation (1901) to the absorption of the Tennessee Coal & Iron Co. the production of open-hearth steel amounted to 53,583,640 tons, as against 69,188,388 tons of Bessemer steel. In the three years immediately succeeding the absorption of this company, 1908 to 1910, inclusive, the production of open-hearth steel has exceeded that of Bessemer by approximately 12,000,000 tons, or 38,835,174 tons open-hearth to 24,860,310 tons of Bessemer.

At present the open-hearth process for general purposes bids fair to practically supersede the old Bessemer converter except in a few localities where the scarcer and more costly Bessemer ores can be obtained under especially favorable circumstances. In 1910 the production of open-hearth steel reached a grand total of 16,504,509 tons, as against 9,412,772 tons of Bessemer. The production of Bessemer steel is actually as well as relatively on the decline, being 2,863,058 tons less in 1910 than in 1906. Attention is called to table in the appendix to this report, giving the relative annual production of both kinds from 1869 to 1910.

The Steel Corporation, at the time of its organization, seems to have accepted without question the saying among steel makers that "phosphorus is to iron what the devil is to religion," and to have regarded as unavailable for general purposes the vast ore deposits of the Birmingham district.

As has been shown, the corporation constructed the immense and costly fabric of its ore, crude steel, and transportation monopoly upon the control of Superior ore as a basis, and the strength and perpetuity of that foundation rested upon the continuing supremacy of the Bessemer converter.

When open-hearth steel, produced as cheaply as the Bessemer and in vast quantities, could be placed upon the market by manufacturers owing their own ore and coal reserves, and assembling their raw material without the use of the corporation's roads and steamship lines, then and then only was the perfect and hitherto seemingly invincible control of the manufacture of steel products seriously menaced.

As has been demonstrated, the absolute power to "*fix*" the price of pig iron enabled the corporation to make and manipulate the price of semifinished steel. It is true these "sliding-scale" contracts were usually predicated upon the price of Bessemer pig iron, but in the event the corporation arbitrarily raised the price of Bessemer pig iron above the basic, it would by that means still further stimulate the production of the latter metal by its competitor, since under changed conditions it could be used interchangeably with the Bessemer pig iron.

It is evident that the production of pig iron in large quantities and at a cost no greater than that of the corporation, notwithstanding its advantages derived from the ownership and control of common carriers, meant the certain destruction of the cunning and costly device by which it had caused so many "shut downs" among its former competitors, dependent upon it for raw material.

Personnel Tennessee Coal & Iron Syndicate.

Expert ore and steel men were not slow to see the infinite possibilities which the development of this process opened to non-Bessemer ores, and grasped the opportunity to obtain control of vast ore and coal deposits in the southern Appalachian region.

In October, 1905, a syndicate was formed which acquired the properties of the Tennessee Coal, Iron & Railroad Co., the largest concern in the Birmingham district, the members of the original syndicate and their individual shares being as follows:

	Shares.
O. H. Payne	10, 300
L. C. Hanna	10, 300
G. B. Schley	10, 300
J. B. Duke	10, 300
E. J. Berwind	10, 300
J. W. Gates	10, 300
A. N. Brady	10, 300
G. A. Kessler	10, 300
O. Thorne	10, 300
E. W. Oglebay	5, 150
H. S. Black	5, 150
F. D. Stout	5, 150
J. W. Simpson	5, 150
G. W. French	2, 500
S. G. Cooper	1, 500
J. A. Topping	1, 000
Total	118, 300

(Hearings, pp. 1124–1125.)

This syndicate was formed for the purpose of *developing* not ***exploiting*** the steel industry, as evidenced by the fact that *not one single dollar* was ever paid to the syndicate or any individual in it for promoting the scheme or underwriting its securities. The immense financial resources of its members assured the capital necessary for the great undertaking, and among its members were men of skill and experience in every department of the businsss.

Oglebay and Hanna had large holdings in the Lake Superior ore fields, long experience in the value and handling of ores, and in the manufacture of pig iron.

Topping, the chairman of its board of directors, was expert in every detail of manufacture from the ore up, and John W. Gates, the organizer of the American Steel & Wire Co., was equally familiar with the industrial and financial operations of such concerns on the most extensive scale.

> The CHAIRMAN. How many practical steel men were in the syndicate—men who understood the business of making steel?
>
> Mr. HANNA. Well, I do not know exactly what you mean when you say "making steel."
>
> The CHAIRMAN. I mean handling ore or making pig iron, for instance.
>
> Mr. HANNA. I do not know of any who were not familiar with the iron and steel industry, but as to those actually connected with it I do not know. I should have to look at a list, Mr. Chairman. I should say five or six or seven, perhaps, who had been, and were then, identified with the steel industry.
>
> The CHAIRMAN. You had been interested in it?
>
> Mr. HANNA. Yes, sir.
>
> The CHAIRMAN. Mr. Berwind?
>
> Mr. HANNA. No, sir; I do not think so.
>
> The CHAIRMAN. Mr. Gates?
>
> Mr. HANNA. Yes, sir.
>
> The CHAIRMAN. Mr. Oglebay?
>
> Mr. HANNA. Yes, sir.
>
> The CHAIRMAN. And Mr. Stout, Mr. Black, Mr. Simpson, Mr. French, Mr. Cooper, and Mr. Topping?
>
> Mr. HANNA. Mr. French had been interested in the steel business and Mr. Cooper had been identified with the steel business.
>
> The CHAIRMAN. What experience had Mr. Topping had?
>
> Mr. HANNA. Mr. Topping had been all his life in the iron and steel business, actively.
>
> The CHAIRMAN. So that from the personnel of this syndicate, I judge you were well equipped, not only as to your financial resources, but you had men in the syndicate who understood from experience—the best school in which to learn things, practical experience, long experience—just how to develop economically and effectively the great business you contemplated establishing in that region.
>
> Mr. HANNA. Yes, sir; I would say so. (Hearings, pp. 886-887.)

The properties of the Tennessee Coal & Iron Co. were located in a region absolutely unparalleled in the close proximity of vast quantities of all the materials essential to the manufacture of iron.

The ore, limestone, dolomite, and coal are assembled by nature within a radius of a few miles.

> "I think," says Mr. Gates, "that in the Birmingham district it is possible to assemble a ton of material and make a ton of pig iron cheaper than any other place in the world." (Hearings, p. 7.)

Mr. Perin, the engineer who had prepared a careful survey covering practically every foot of this district, states:

> The CHAIRMAN. You did not complete your answer as to the Woodward Co. I want to know the number of miles they haul their limestone, coke, and iron?
>
> Mr. PERIN. I think the coke is hauled somewhere between 3 and 4 miles and the limestone an average distance of 2½ miles.
>
> The CHAIRMAN. So, as a rule, it is the same haul and the same freight within that radius of 25 miles.
>
> Mr. PERIN. Yes.
>
> The CHAIRMAN. Does that spring from the fact that in the whole region they find within that radius those three essentials in the making of pig iron?
>
> Mr. PERIN. Practically so, and so as not to give any one corporation any particular advantage over the other. The rates were established so as to equalize competition in the district.
>
> The CHAIRMAN. Now, you have spoken of your experience in locating ore regions in this country and in India. Is there any place on the habitable globe known to the iron industry where that physical condition exists or anything approximating it?
>
> Mr. PERIN. The only possible parallel conditions, where the juxtaposition of the raw material is such as exists in the Birmingham district, are in Middlesboro, England. There the iron ores are of a lower grade, and they bring their fuel a distance varying from 10 to 25 miles. That is almost a parallel with the conditions that obtain in Birmingham, but there are no such large single deposits as exist in the Birmingham district. (Hearings, p. 982.)

Mr. Schwab has made practically the same statement to the Ways and Means Committee in 1908:

> For example, I know that pig iron can be produced in different parts of Germany at from $9.50 to $12 a ton to-day, depending upon the location and character of the pig.
>
> The CHAIRMAN. Against $14 here?
>
> Mr. SCHWAB. About $14 to $14.50 here.
>
> * * * * * * *
>
> The CHAIRMAN. That is in Germany. How about England?
>
> Mr. SCHWAB. England is probably a little cheaper, though it is not widely different.
>
> The CHAIRMAN. What is the main reason for the additional cost of the pig iron here?

> Mr. SCHWAB. Raw material and freights being higher.
>
> The CHAIRMAN. Their iron is nearer the coal mines?
>
> Mr. SCHWAB. Yes. They assemble it cheaper than we do.
>
> The CHAIRMAN. I do not suppose they do it any cheaper than we can at Birmingham?
>
> Mr. SCHWAB. *No; we do it cheaper in Birmingham than they do in England.*
>
> The CHAIRMAN. You think the cost of pig iron in Birmingham would be less than the cost in England?
>
> Mr. SCHWAB. *I know it would be.*
>
> The CHAIRMAN. The cost of converting the steel is about the same?
>
> Mr. SCHWAB. In Birmingham it is about the same. (Hearings, p. 1133.)

The Tennessee Coal, Iron & Railroad Co. acquired the greater part of all the available ores in this region according to Mr. Perrin, who spent months on these properties in a careful survey intended to determine both the quantity of ore in that district which was economically available and the relative amount held by this and other large concerns.

> "Estimating," says Mr. Perin, "the tonnage of the Woodward Co. and of the Birmingham Coal & Iron Co. and the Birmingham Iron Ore Co., I would say that the Tennessee Coal, Iron & Railroad Co. possesses about 70 per cent of Red Ore Mountain.
>
> The CHAIRMAN. That is, of the ore-bearing district?
>
> Mr. PERIN. The range which is tributary to the fuel at the present time, the area of low-assembling cost.
>
> The CHAIRMAN. If the Tennessee Coal & Iron Co. has 70 per cent of the entire region, what per cent of the region is now marketable and can be purchased by any man who goes down there and opens a blast furnace and buys his own coal on the ground?
>
> Mr. PERIN. I suppose, outside of the Birmingham Iron Ore Co., there is no merchantable ore for sale in the Birmingham district.
>
> The CHAIRMAN. How much have they at their disposal?
>
> Mr. PERIN. I have no accurate knowledge.
>
> The CHAIRMAN. What per cent?
>
> Mr. PERIN. Very small; possibly 2½ per cent to 5 per cent.
>
> The CHAIRMAN. Of the whole region?
>
> Mr. PERIN. Yes, sir. (Hearings, p. 980.)
>
> * * * * * * *
>
> Mr. PERIN. I should consider this as one of the greatest properties I know of anywhere in the world, take it by and large; that is, considering the proximity of the iron ores to the coal. (Hearings, p. 984.)

On December 31, 1906, Mr. Topping made the following statement to the board of directors of the Tennessee Coal & Iron Co.

> The knowledge that your executive committee has acquired as to the tonnage and character of the iron ore, coal, and limestone owned in fee simple by your company satisfies them that, in

> wealth of raw materials required for the manufacture of iron and steel, your company ranks as second to only one in the world, and is far in advance of any other iron or steel producer in cost of assembling its raw materials for manufacture.
>
> The mineral reserves of coal and iron contained in your lands, as computed by competent authorities, are estimated to be 700,000,000 tons of iron ore and 2,000,000,000 of coal. Approximately, one-half of your coal supply is of a superior coking quality, and your iron ore is largely of a self-fluxing character, analyzing approximately 38 per cent metallic iron. This ore is well suited to the manufacture of high-grade foundry pig iron, and to the production of basic iron pig for use in the manufacture of basic open-hearth steel. (Hearings, p. 1232.)

When before this committee he was interrogated in regard to this report as follows:

> Is that the statement prepared by you at the time as the chairman of the board?
>
> Mr. TOPPING. That is the statement I made to the stockholders.
>
> The CHAIRMAN. Is that a correct statement?
>
> Mr. TOPPING. So I believe. It was the report of our engineers, and based on their own estimate. I might say in that connection that that estimate was not based on complete drilling records--the property was not entirely drilled, and is not as yet to-day, so far as I know—but based on the tonnage produced per acre and from the opened-up properties. Our own engineering or mining department believed *that that was a conservative statement,* and I accepted that statement for my report to the stockholders. (Hearings, p. 1232.)
>
> * * * * * * *
>
> The New York Sun, November 7, 1907, said: "The acquisition of the [Tennessee] company is particularly advantageous to the Steel Corporation, because of the iron ore and coal properties that go with it. With the Great Northern and Northern Pacific ore lands acquired last year, together with the previous holdings, the Steel Corporation now has iron-ore deposits estimated at approximately 2,400,000,000 tons, of which approximately 700,000,000 tons come with T. C. & I." (Hearings, p. 1129.)

John Moody, in an article in Moody's Magazine for January, 1909, said:

> But the most fortunate business stroke of the Steel Corporation, from the viewpoint of its owners, since its organization in 1901, was the acquisition last year of the Tennessee Coal, Iron & Railroad property. The acquisition of this organization has added great potential value to the steel organization and has increased the tangible equity of its common-stock issue to a far greater extent than is commonly realized. The Tennessee coal and iron properties embrace, besides important manufacturing plants, nearly 450,000 acres of mineral lands in the Birmingham section of Alabama. As shown in the report of the Tennessee company in 1904, when an appraisal was made by outside parties, these lands contain approximately 400,000,000 tons of

> first-class low-grade ore, and more than 1,200,000,000 tons of coal, of which about one-half is coking coal. This estimate indicates that the deposits embraced are even in excess of those of the great Lake Superior properties controlled by the corporation, including the Great Northern ore bodies. This entire property was acquired, as is well known, on very favorable terms for the Steel Corporation, and of course puts it in a position where now it need have no concern regarding a possible future shortage of supply of either iron ore, coal, or coke. Added to this is the fact that the deposits are more favorably located than those of the Lake Superior district and will enable the company to carry on in the years to come a vast economic development of production and manufacture in this section of the country. The Tennessee ore is of a grade which is better for the making of ordinary pig iron than that of any other known deposits in this country. (Hearings, pp. 1129–1130.)

The incalculable advantage of securing coal, ore, and limestone from adjacent hills will be more fully appreciated when it is considered that the ore deposits of the Steel Corporation were located at the head of Lake Superior and its principal coal measures in West Virginia and Pennsylvania, and it is a thousand miles by the course of the traffic from the Mesabi Range to the Connellsville coal fields.

This facility in assembling the raw materials enabled operators to produce pig iron at from three to four dollars per ton less than any other manufacturer in the United States. In other words, an operator at Birmingham can make pig iron for sale in the vicinity of his furnace at a living profit for less than the actual cost of production to his competitor in Pittsburgh.

Mr. Perin states:

> The CHAIRMAN. Have you ever had any practical experience in the construction or operation of blast furnaces and other plants for the manufacture of steel?
>
> Mr. PERIN. I have held every position at a blast furnace from fireman, with a negro partner, to proprietor.
>
> The CHAIRMAN. Have you ever constructed any blast furnaces?
>
> Mr. PERIN. I have built one and I have reconstructed about eight.
>
> Mr. YOUNG. Which one?
>
> Mr. PERIN. I built the Ashland No. 2 blast furnace. I was superintendent of the Norton furnace, the two Middlesboro furnaces, the two furnaces of the Londonderry Iron Co. I remodeled their No. 2 furnace. I have held other positions of a subordinate capacity, as well as superintendent and general manager. (Hearings, p. 971.)
>
> * * * * * * *
>
> Mr. PERIN. Based on to-day's selling prices, which I presume would be a fair approximation of their cost price, there is nearly $4 difference in the cost of production between the two districts. Pittsburgh is able to produce at a very low figure, by reason of

> its large plants, and large production and excellent equipment. (Hearings, p. 971.)
>
> * * * * * * *
>
> The CHAIRMAN. I wish to show you extracts from this report prepared for the Geological Survey by Mr. Phillips showing the cost of manufacture of pig iron in 1894, 1895, and 1896. This report shows the average cost to manufacture pig iron per ton, as follows: $6.457 for the year 1894, $6.65 for 1895, and $6.464 for the year 1896. Is it a fact that this is the lowest cost of production that pig iron could be manufactured for in the known world?
>
> Mr. PERIN. I do not think there is anybody to-day who could come within $3 of that cost. (Hearings, p. 984.)

John W. Gates states:

> A ton of pig iron, under the most modern practice, in what is known as the Birmingham district can be produced to-day for less than $9 a ton. There is no other part of the United States that I am acquainted with, however, where it can be produced at less than $11 a ton, based on the freight rates for assembling the raw material. As an illustration, the freight rate on dolomite, which is used for the flux, is perhaps 12½ cents a ton, in some cases possibly 15 cents a ton, freight to the furnace. The freight on the coke in some instances is nothing; the coke is made at the furnaces. The freight on the ore varies, I think, from 10 cents a ton to about a maximum of 25 cents a ton on anything directly in the Birmingham district. When you get out of the Birmingham district and get to use a richer brown ore, the freight rate runs up to 35 cents and 40 cents, and, I think, 50 cents, a ton; but in the close proximity of Birmingham you can assemble the material and make a ton of pig iron cheaper, in my opinion, *than anywhere in the world.* (Hearings, pp. 7, 8.)
>
> * * * * * * *
>
> Mr. GIVEN. * * * I do not know of any place on God's green earth—if there is any such place I have never read of it—where they can get the material for making pig iron together as quickly, as cheaply, and as continuously as they can in Birmingham. (Hearings, p. 1011.)

This new and powerful concern prepared to make the most of its unique advantage in the production of pig iron and entered aggressively into its manufacture into steel in its more finished forms, having secured with this huge ore and coal reserve, the Birmingham Southern Railroad and a plant described by the Steel Corporation as follows:

> The Steel Corporation, in its corporate capacity, is on record as to this property. In the Sixth Annual Report of the United States Steel Corporation for the year ending December 31, 1907, the holdings of the Tennessee Co. which were acquired are given as follows (pp. 26, 27):
>
> "Surface and mineral rights acreage of iron ore, coal, and limestone property, owned in fee, 447,423, distributed as follows: In Alabama, 340,263 acres; in Tennessee, 105,740 acres; in

> Georgia, 1,420 acres. Upon this property there were in operation in the State of Alabama, near Birmingham, 13 active iron-ore mines, with 2 under construction and at Greeley 3 active iron-ore mines. In Georgia there were 2 active iron-ore mines in operation.
>
> "In Alabama there were in operation 22 active coal mines and 2,800 coke ovens; in Tennessee, 1 coal mine and 174 coke ovens.
>
> "There were 2 active quarries, 1 inactive, and 1 in course of development, all in Alabama.
>
> "There were 14 active blast furnaces in Alabama; 2 in Tennessee.
>
> "All mills, foundries, machine shops, etc., were located at Ensley and Bessemer, Ala., near Birmingham.
>
> "The Tennessee Co. owned the capital stock of the Birmingham Southern Railway Co., a terminal railroad connecting the various mines and plants of the company in the Birmingham district, consisting of 31.16 miles of main and branch lines, 1 mile second track, 67.78 miles yard and siding tracks, 35 locomotives, and 725 cars of all descriptions.
>
> "The Tennessee Co. owned the entire issued capital stock of the Tennessee Land Co., the Booker Land Co., and a controlling interest in the stock of the Ensley Land Co.—these companies owning various tracts of land adjoining the several properties of the Tennessee Co.
>
> "The net profits of the Tennessee Co. for the year 1907, after charging off $437,666.84 for depreciation and extraordinary replacements, and $885,552.31 for net interest charge on bonded and floating debt, were $1,426,684.58 (a little more than 4½ per cent on the capital stock).
>
> "The company spent during 1907 for extensions, additions, and betterments the sum of $6,589,116.99." (Hearings, p. 1132.)

Mr. Schley, the syndicate manager, in speaking of the personnel of the owners of this company and the character of the improvements which were being made up to the very hour it was absorbed, says:

> The CHAIRMAN. This property that you men had taken hold of had already been improved, as I understand, by the expenditures of six or seven million dollars, and that expenditure had been made under the supervision of Mr. Topping, had it not?
>
> Mr. SCHLEY. Yes; and a half a dozen other most capable men.
>
> The CHAIRMAN. And every dollar they put into that business was put where it would "burn," to use a slang expression, was it not?
>
> Mr. SCHLEY. Yes.
>
> The CHAIRMAN. And where you would get the best results?
>
> Mr. SCHLEY. Yes.
>
> The CHAIRMAN. Was there a steel plant on the continent more skillfully constructed, more capable of bringing to the men who constructed it ample returns, than the steel plant at Ensley?
>
> Mr. SCHLEY. I do not think there is any better. The Steel Co. carried it out on exactly that same plan. They could not improve on it. (Hearings, pp. 1114–1115.)

The character of improvements, completed and in contemplation, is taken from the last report made by this company and reproduced in the Sixth Annual Report of the United States Steel Corporation:

ACTUAL AND PROPOSED INCREASE OF OUTPUT.

> "As compared with previous years, your earnings may be favorably regarded with operating profits in excess of 20 per cent on your volume of business. This result, considering the almost unlimited tonnage of your mineral reserves and their great potential value, should suggest no delay in providing the necessary facilities to meet your income opportunity. Your executive committee, recognizing the inadequacy of your present facilities, has authorized substantial expenditures to increase your volume of business and income; but further expenditures could be advantageously made" (p. 7).
>
> "But, as heretofore stated, the maximum possibilities with your present manufacturing and mining facilities are not sufficient for the most favorable results. The extensive improvements now under way, both in your mining and manufacturing departments, will greatly strengthen your operations when completed and in running order" (p. 18).
>
> "The physical condition of your mills during the past year (steel works and rolling mills) has been improved by liberal expenditures" (p. 28).
>
> "While a general rehabilitation of old equipment has been taken care of by liberal maintenance, your executive committee have realized the necessity of increased steel and rail productive capacity and have authorized the construction of a modern steel works and rail mill. These extensive improvements are expected to *Double Your Steel Output and Rail Capacity* (capitals and italic in text) and radically reduce your cost of production. The benefits expected from these additions to plant will not be operative until the last half of 1907" (p. 28).
>
> "The same policy as applied to your steel works and rolling mills, in respect to betterments and maintenance, has also been applied in building up your blast-furnace department" (p. 29).
>
> "These extensions (iron mines and quarries) are all under way and substantially increased production will be realized during the year 1907" (p. 30). (Hearings, pp. 1127–1128.)

And this was the work of a real *competitor*. John W. Gates, the active and controlling spirit of both the Tennessee and the Republic Iron & Steel Cos., did not subscribe to the doctrine of "cooperation" and displayed no fear of "destructive competition." Before this committee he stated:

> Mr. GATES. * * * My theory is that I would rather have an open market and be able to run full and not be hampered by any competitors saying: "You are selling goods too low," *than to have a fictitious market* where I could only run 40 or 50 or 60 per cent. *That has always been my idea.* (Hearings, p. 43.)

As a result of the putting into actual practice of this wholesome theory the business of the Tennessee Co. advanced by leaps and bounds as evidenced by its minutes during the last year of its industrial independence:

On May 21, 1907—

> Meeting of board of directors.
>
> The chairman presented condensed comparative statement of earnings and of all products for four months ending April 30, 1907, as compared with the same period in 1906. Net earnings above all fixed charges, interest, and depreciation amounted to $611,247.17, a gain of 35 per cent over last year, and surplus, after paying dividends, interest on common stock, subscriptions, and all special charges, amounted to $335,638.61, a gain of 37½ per cent.
>
> Production showed the following percentages of increase over last year: Ingots, 4 per cent; pig iron, 11 per cent; merchants' steel, 18 per cent; coal, 24 per cent; coke, 5 per cent; iron ore, 12 per cent; limestone and dolomite, 2 per cent. Price for iron, $20 to $21 per ton Birmingham. Sales thereof for first quarter 1908, at $18.50.
>
> The chairman reported on the subject of a revaluation of the mineral properties of the company that the chartered accountants had agreed to the proposition that it would be in line with proper procedure to establish a higher valuation in view of the large appreciation which has taken place in the value of raw materials during the past few years; the purpose of such revaluation being in the present instance the creation of a surplus value sufficient to cover the depreciation which must inevitably be provided for in carrying out the policy established of rebuilding our manufacturing department.
>
> The chairman presented a statement showing a condition of rail sales for 1906–7 indicating a tonnage booked for delivery to January 1, 1908, of 327,199 tons. The chairman stated that the extension to the steel works, if promptly authorized along the lines suggested by detail plans to be submitted by the next meeting of the board, on June 12, and which, if adopted and authorized, it was thought would enable the management to bring into service the new equipment of the steel works extension by the 1st of May, 1907, would add an increase in the output to our present capacity estimated at from 15,000 to 20,000 tons per month. Based on this estimate, he further stated that the estimated output of rails prior to January 1, 1908, would be approximately 425,000 tons. He desired to know whether it would be advisable, in the judgment of the board, to sell the surplus rail output of approximately 100,000 tons. After discussion, it was, on motion—
>
> "(27) *Resolved,* That the management be authorized to sell 100,000 tons of steel rails at the present market for such delivering in 1907 as the company can make."
>
> (Min. board of dir. T. C., I. & R. R. Co., May 23, 1908; MacRae Rept., p. 4290.)

The chairman presented a complete monthly statement of operations for the month of August, showing net earnings of $72,241.50, improvement over preceding month of approximately $40,000; also showing a material increase in the production and shipments in all departments. (Min. board of dir. T. C., I. & R. R. Co., Sept. 18, 1906; MacRae Rept., p. 4293.)

The chairman presented the regular statements covering the operations of the company for the month of December and the 12 months ending December 31, 1906, comprising the following individual reports: (1) Income account; (2) analysis of earnings; (3) orders on hand, pig iron and steel; (4) production cost, shipments and prices, December; (5) production cost, shipments and prices, year; (6) general balance sheet; available assets.

Income account showed net earnings after interest charges and depreciation of $95,241.89 for the month and $1,145,006.81 for the year; dividends of 4 per cent on common stock and 8 per cent on preferred stock amounted to $912,080; sinking fund on general mortgage bonds to $47,760; interest on subscriptions to new common stock to $48,376.21.

The chairman also presented a letter from Mr. L. Hoover, treasurer, accompanying the statements, summarizing the results for the year in comparative form with those of the previous year, together with a statement which is filed with the executive record papers of this meeting.

"*Resolved*, That the investment of this company in the stock of the Potter Ore Co. be valued at $400,000, same representing the cash investment of $50 000 plus the liability of the company to its proportion of $700,000 of guaranteed bonds."

Attention was called by the chairman to the fact that this valuation was equivalent to 10 cents per ton on 40,000,000 tons of ore, which our interest in the tract is estimated to contain, and that based upon a 5 per cent royalty the operation of the sinking fund will retire the bonded debt and vest absolute title to the property in the company upon the payment of a less sum in the aggregate as interest than would have been paid to the owner of the property upon the same tonnage as royalty based upon an average price of pig iron.

The chairman presented statements of sales and production, both for the period ending December 31, 1906, and for the month of January to date. From the former it appeared that the orders for pig iron on the books amounted to 142,000 tons of foundry grades and 62,000 of basic, which, allowing for our own requirements, indicated that upon our estimated output the company was sold up on all grades for the first half of 1907 and for about 25 per cent of its make on the last half. (Min. ex. com., Jan. 30, 1907; MacRae Rept., p. 4296.)

The chairman submitted the customary statements, showing all operations for the month of April and for the four months ending April 30. Net earnings for the month amounted to $191,147.84, a gain over the preceding month and the best record since 1904, and for the four months amounted to $611,247.17, a gain of 35 per cent over the corresponding period last year. The chairman stated that on pig iron the company was sold up practically for the year 1907, the surplus of unsold iron being estimated at only about 30,000 tons. (Min. ex. com., May 21, 1907; MacRae Rept., p. 4299.)

Income account showed balance above all charges and depreciation amounting to $221,998.58, a gain of nearly $31,000, as compared with April, and the best month recorded since 1903; surplus for the five months ending May 31 amounted to $838,245.75, as compared with $558,513.28 for the same period in 1906. The report was ordered on file.

As a matter of information, the chairman presented a comparison of earnings with the Sloss-Sheffield Steel & Iron Co. for the quarter comprising the months of March, April, May, 1907 and 1906, showing an increase in net earnings for the Tennessee Co. of 65 per cent, as compared with 56 per cent for Sloss. (Min. ex. com., June 25, 1907, p. 4302.)

REPORT OF RAIL SALES AND AVERAGE PRICES.

Total tonnage on the books June 1, 416,846 tons, average price, $28.93, including both first and second quality. Based on the estimated production to the end of the year 1908, an apparent surplus is available for sale of upward of $30,000. The chairman stated that it might be safe to consider we had from 40,000 to 50,000 tons to sell for 1908 delivery. He advised that we are holding the price of rails at $30 for standard sections to trunk lines, and at $32 for street car use. (Min. ex. com., June 25, 1907, p. 4304.)

The Sixth Annual Report of the Steel Corporation summarized the phenomenal development of this company as follows:

THE TENNESSEE COAL, IRON & RAILROAD CO.

Comparative statement of income (p. 20).

Gross profits—	
For 1904	$1,862,631.21
For 1905	2,484,139.26
For 1906	2,753,159.85
For 1907 (p. 27, U. S. S. C. Rept.)	2,749,903.73
Gross sales and earnings (p. 19)	
For 1904	9,607,578.74
For 1905	10,951,979.02
For 1906	13,265,970.66

New construction and development of land (pp. 24, 25).

For 1906	$1,355,632.28
For 1907 (p. 27, U. S. S. C., 6th Ann. Rep.)	6,589,116.99

In this connection note that the total costs of the plants of the Tennessee Co., excluding land, was, on the date of this report (p. 21), $11,211,872.30, and that of the $6,589,116.99 expended for new construction in 1907 only about $72,000 was expended for land, leaving the balance of over $6,500,000 expended for enlargement of its manufacturing capacity, or an increase of about 60 per cent.

* * * * * * *

UNFILLED ORDERS.

"The unfilled orders now on your books represent the largest tonnage in the history of your company. The business is well distributed and indicates broadening markets for all products. This is particularly true of coal and coke. The prospects for the future, as suggested by business on hand, shows no sign of business recession, and the outlook for the year 1907 is most encouraging" (p. 37).

Memorandum of unfilled orders as of January 1, 1907.

	Tons.
Manufactured iron and steel products	467, 114
Coal	1, 200, 000
Coke	201, 000

(p. 37.)

COMPARATIVE PRODUCTION.

	Tons.
Rails, billets, steel bars, and plates (p. 28):	
For 1904	155, 266
For 1905	402, 318
For 1906	401, 882
For 1907 (p. 27, U. S. S. C., 6th Ann. R.)	477, 624
Pig iron (p. 29):	
For 1904	475, 314
For 1905	529, 036
For 1906	641, 887
For 1907 (p. 27, U. S. S. C., 6th Ann. R.)	602, 827
Iron ore (p. 30):	
For 1904	1, 208, 038
For 1905	1, 436, 282
For 1906	1, 483, 476
For 1907 (p. 27, U. S. S. C., 6th Ann. R.)	1, 576, 757

POTENTIAL CAPACITY.

(P. 32.)

"The knowledge that your executive committee has acquired as to the tonnage and character of the iron ore, coal, and limestone owned in fee simple by your company satisfies them that, in wealth of raw materials required for the manufacture of iron and steel, your company ranks as second to only one in the world, and is far in advance of any other iron or steel producer in cost of assembling its raw materials for manufacture.

"The mineral reserves of coal and iron contained in your lands, as computed by competent authorities, are estimated to be 700,000,000 tons of iron ore and 2,000,000,000 tons of coal. Approximately one-half of your coal supply is of a superior coking quality, and your iron ore is largely of a self-fluxing character, analyzing approximately 38 per cent metallic iron. This ore is well suited to the manufacture of high-grade foundry pig and to the production of basic pig iron for use in the manufacture of basic open-hearth steel" (p. 32).

"The financial statement shows your company to be in a sound financial condition, with current assets of $3,004,480.09 in excess of your current liabilities" (p. 9). (Hearings, pp. 1126–28–29.)

No product in a steel mill promises a more certain or lucrative return than steel rails. The close relations existing between the makers of steel rails and the users of them have maintained the price without change for more than 10 years at $28 a ton.

At the time this syndicate secured control of the Tennessee Coal & Iron Co. steel rails were made from Bessemer pig iron. The only open-hearth rails produced up to that time had been practically for experimental purposes.

> "I think," said Mr. Roberts, "other rail makers had rolled from time to time open-hearth steel rails in an experimental way—not very large orders. But the Tennessee Co. were not a manufacturer of Bessemer steel, due to the fact that the ores in Alabama were not Bessemer ores; it was therefore necessary for them to enter into the manufacture of open-hearth steel rails when they built their rail plant, as they were unable to make Bessemer steel. They, therefore, were one of the earliest, or the earliest, of open-hearth steel-rail plants in the country." (Hearings, p. 359.)

Whatever steel rails were made prior to the time Gates and his associates took charge of the Tennessee Co.'s property were certainly, as Mr. Roberts says, "in an experimental way." The total production of Bessemer steel rails between 1897 and 1905 was 22,358,729 tons, and of open-hearth rails 385,899 tons. (Annual Statistical Report American Iron & Steel Association, 1906, p. 67.) Gates testifies that his company erected and operated the first and only open-hearth steel-rail mill in the United States, and so successful was this concern in the manufacture of rails from its cheap material that it soon became manifest that their product was superior to the rails made by the Steel Corporation from its high-priced Bessemer ore. As stated in the New York Press of November 7, 1907:

> "The Tennessee is one of the two steel companies in the United States which manufacture open-hearth rails, now so greatly in favor with the railroads. When Harriman bought 160,000 tons of rails of the Tennessee Co. a few months ago it brought the steel company to a realization that it had a strong competitor in the steel-rail field." (Hearings, p. 1129.)

This was due in great measure to the toughness and ductility of the open-hearth steel.

Referring to the time just prior to the absorption of this company by the Steel Corporation, Mr. Gates says, "Why, we had just taken a very large order for rails—I think 150,000 tons of rails—from Mr. E. H. Harriman, at $2 per ton advance over the price of Bessemer steel rails."

> Mr. BEALL. What kind of rail were you making?
>
> Mr. GATES. We were making a Bessemer open-hearth rail. We took the contract, I think, for the Southern Pacific and the Union Pacific roads for an open-hearth rail. Whether they were actually making the rails at the time the company was taken

> over by the corporation I do not remember, but we were preparing to make the open-hearth rail and had sold 150,000 tons.
>
> The CHAIRMAN. What was the reason for this excess in the price of your rail over the Bessemer rail?
>
> Mr. GATES. We thought it was a better rail and we convinced Mr. Harriman. (Hearings, p. 8.)

Mr. Harriman was not the only great railroad official who was convinced that steel rails could be made from the product of open-hearth furnaces which were in every way superior to the Bessemer rails of the Steel Corporation, and it was evident from the records of the Steel Corporation that they fully appreciated the effect of the entry of this newly organized company into the rail business. The superior excellence of this rail had been impressed upon the superintendent of the Pittsburgh & Lake Erie Railroad. Mr. Morgan himself was a director in this great railroad. It had terminals in Pittsburgh and was bound to the Steel Corporation by the closest financial relations. Mr. Bope, the general sales agent of the Steel Corporation, on March 19, 1906, states:

> The general superintendent of the Pittsburgh & Lake Erie told us the other day that after testing open-hearth rails furnished them by the Tennessee Coal & Iron Co. and our Bessemer rails they have decided that *open-hearth are twice as good as Bessemer rails*. He wanted to know when we would be able to make open-hearth rails and said they would be willing to pay a little more for open-hearth than for Bessemer. *The same thing has come to us from two or three other people, indicating that the railroads are paying a little attention to the matter.* At the time when they were buying rails we could not make open hearth, and of course they took Bessemer, and they will not be able to get open hearth *anywhere in this country* for the next year and a half; but I imagine that when the demand for rails falls off, *which will probably be in 1907*, on account of the heavy purchases made last year and this, *then we will be up against the open-hearth proposition good and hard.* (Hearings, p. 4077.)

This statement by the man best qualified to know, the general sales agent of the Steel Corporation, shows that it was the opinion of this great railroad, of which J. Pierpont Morgan was a director and closely allied with the New York Central Railroad system, that this *open-hearth rail was twice as good by actual test as the Bessemer rail* of the Steel Corporation, *and other railroads were of the same opinion*, that the Steel Corporation was not prepared to make these rails, and *that by 1907* they would be up against the open-hearth proposition "good and strong." The apprehension of the Steel Corporation that the Tennessee Coal & Iron Co.'s rail, superior in quality, manufactured at a less cost, and sold at a higher price than their own, would in a short time supersede the Bessemer, was indeed well founded, as is evident from the subsequent history of the development and growth of the manufacture of open-hearth rails. In 1908 of all rails manufactured in the United States 1,349,153 tons were rolled from Bessemer steel, while 571,791 tons were the product of open-hearth furnaces. In 1909 the production of Bessemer and open-hearth steel rails was 1,767,171 tons and 1,256,674 tons, respectively. By 1910 the production of Bessemer and open-hearth rails was 1,884,442 tons and 1,751,359 tons, respectively. (Herbert Knox Smith, Pt. I, pp. 362–363.)

It is also apparent from the records of the Tennessee Coal & Iron Co. that this syndicate, backed by great wealth and controlled by practical steel men, who, without regard to cost, were working with feverish energy and the most sanguine hopes to meet this growing demand and to enter boldly into this most coveted and lucrative department of the steel business. The Steel Corporation was indeed "up against it good and strong." Nothing since the threat of Carnegie to build a tube mill at Conneaut had put them "up against it" to the same extent or in the same way, and this company could not be reached by any of the methods which the Steel Corporation had hitherto used so successfully against competitors. There were no interlocking directorates, and for that reason it was impossible to make those secret arrangements so mutually beneficial which for years had characterized transactions between the Steel Corporation and the Standard Oil and similar interests.

It appears that, absolutely secure in the ownership of vast ore reserves, in no way dependent upon the Steel Corporation for facilities either to assemble its ores or to sell its finished product, in no way affected by any manipulation in the price of raw materials, it was apparently impregnable. More than that, the strength of the Tennessee Coal & Iron Co. can not be measured by its wealth or by its resources, natural and financial, immense as they are. The Republic Iron & Steel Co., located in the same region, and holding 50,000,000 tons of iron ore and over 173,000,000 tons of coal (hearings, p. 1040), was closely allied with the Tennessee Coal & Iron Co. In fact, the two properties were owned practically by the same men, who had placed their holdings in two separate corporations. The board of directors of both companies was identical and both were operating in perfect harmony with other steel and iron companies in that region. The Steel Corporation had no hold whatever in southern territory. From Ashland, Ky., to El Paso, Tex., it was unable to sell one pound of pig iron in competition with the Birmingham furnaces. With this vast and rapidly developing region secure to it by virtue of its natural advantages, the Tennessee Coal & Iron Co. was prepared and preparing to invade the domain and to contend for a share in the markets hitherto preempted by the Steel Corporation and other northern markets in their own territory.

Since it was impossible to cajole or coerce the men in charge of this new and virile competitor, the only remaining means of eliminating it was by securing in some way the control of its stock. It appears that the directors of the Tennessee Coal & Iron Co. realized that the nature of their operations would render the securities of this company a coveted morsel to their great competitor, and for that reason they took every precaution to retain their control by locking up in their own strong boxes a safe majority of the stock. The peril to the Tennessee Coal, Iron & Railroad Co. was not open competition in the markets, but secret operations in the stock exchange. Carnegie, it will be remembered, put the stock of his company in shares of a thousand dollars each to prevent speculation in them. The directors of the Tennessee Co. took even more effective measures. Utterly indifferent to the quotations on the stock market and determined not to sell it, they deliberately destroyed its value for speculative purposes by "pegging" it. That is, they entered into an agreement not to sell this stock except under certain circumstances, and then it could only be marketed under certain conditions by the syndicate managers, Messrs. Schley and Hanna.

> "There was probably," said Mr. Gates, "no floating stock; it was so closely held by the people who had bought it for an investment. There was practically no stock in the hands of brokers." (Hearings, p. 16.)
>
> "I thought," says Mr. Schley, "that by bringing the company out to its earning capacity, that the future of it would be one of considerable prosperity, *something to hang on to.*" (Hearings, p. 1047.)
>
> Mr. BARTLETT. Mr. Schley, talking about the value of the Tennessee Coal & Iron Co. with reference to its property in Alabama, it was valuable as a manufacturing plant and much more valuable after you had spent $5,000,000 or $6,000,000 in improvements on it?
>
> Mr. SCHLEY. Indeed it was. We had great hopes for it.
>
> Mr. BARTLETT. As a promoter of the scheme to buy stock and put it into this syndicate you had the idea that it was very valuable, and you promoted it for the purpose not of selling the securities upon the market, but of increasing its value by improvement, *as a permanent investment?*
>
> Mr. SCHLEY. Yes, sir.
>
> Mr. BARTLETT. You had no idea of organizing the company for speculative purposes?
>
> Mr. SCHLEY. No, sir; not at all. (Hearings, p. 1104.)
>
> The CHAIRMAN. When you spoke of these men putting their stock in strong boxes, is it not true that Mr. Gates and Mr. Topping and Mr. Oglebay and Mr. Hanna—is it not true that the wealth, the power, the effectiveness, the future of this property was in the hands of strong men who had conducted a productive and not a speculative business, and who were comparatively indifferent, until this sudden hour of disaster, as to the market price of the stock of the Tennessee Coal & Iron Co.?

> Mr. SCHLEY. They were entirely indifferent as to its market value.
>
> The CHAIRMAN. They did not care whether it was current or uncurrent, *because they were not selling;* is not that true?
>
> Mr. SCHLEY. That is true. (Hearings, pp. 1113–1114.)

The chairman of the board of directors, Mr. Topping, states:

> The stock was tied up by a so-called syndicate agreement, which in itself "pegged" the stock. It withdrew it from the market as a speculative security and left a very small amount, as you know from previous witnesses, of so-called free stock.
>
> The CHAIRMAN. In its general provisions did this agreement prevent a sale of a majority of the stock without the concurrence of both the syndicate managers, Mr. Schley and Mr. Hanna?
>
> Mr. TOPPING. It did. So far as my stock was concerned, I felt I was under a moral obligation not to sell, and I did not sell; and so all the others felt who were in that syndicate. It was simply an agreement, substantially, based on honor, with gentlemen who were in it, to keep out of the market.
>
> Mr. BARTLETT. That was one of the purposes of the agreement, to keep it out of the market?
>
> Mr. TOPPING. *The purpose was to keep it out of the market so as to maintain the control of it, naturally.*
>
> The CHAIRMAN. You were indifferent about what they did with that stock so long as a clear majority of it was locked up in the strong boxes of the men operating this property?
>
> Mr. TOPPING. That was the purpose of the syndicate, Mr. Chairman, as I understood it.
>
> The CHAIRMAN. Did you desire to have Schley sell this stock?
>
> Mr. TOPPING. I did not. (Hearings, pp. 1237, 1238, 1239.)

Mr. Lewis Cass Ledyard, the attorney through whom Schley negotiated with Morgan, and who thoroughly understood the attitude of the syndicate, says:

> I do not think the syndicate had any idea, as a syndicate, of getting this stock together and selling it out to the United States Steel Corporation, if that is in the question. Mr. Hanna, when he came on here, and his brother, who I think had some interest in the stock, both were very much disturbed by the idea *that this thing which they had built up and were going to make a great company of, should have to be sold out for other people's necessities.*
>
> Mr. GARDNER. In other words, those members of the syndicate who did not find themselves in financial difficulties, did not want to sell the stock?
>
> Mr. LEDYARD. No; and Col. Payne, who had a lot of this stock did not want to sell it——
>
> Mr. GARDNER. They did not want the control to go out of their hands?
>
> Mr. LEDYARD. No; they did not; I think you are right about that. (Hearings, p. 963.)

It appears that in spite of the precaution and the vigilance exercised by the directors of the Tennessee Co. that the syndicate manager, Mr. Schley, and a New York wine merchant by the name of Kessler,

> Mr. Littleton. And having their choice of the securitie which they would take for that loan, *they picked out wholl Tennessee Coal & Iron?*
>
> Mr. Schley. Yes.
>
> Mr. Littleton. And they took it——
>
> Mr. Schley. At 60. (Hearings, pp. 1090–1091.)

In the course of this transaction it was apparent that Schley, th syndicate manager of the Tennessee Coal & Iron Co., holding larg amounts of its stock, was willing to dispose of it to meet his urgen necessities—stock which he had hitherto prized so dearly, "something to hold on to," and which his associates in the enterprise ha locked in their strong boxes. It might reasonably be apprehende that as his financial condition grew more desperate his hold upon th stock would be loosened. To save himself from ruin Schley migh be induced to disregard his agreement as syndicate manager, or t appeal to his associates to permit him to disregard it, and when h did the Steel Corporation was necessarily the only purchaser of thi immense property.

Be that as it may, one thing is certain: From the day the thre directors of the Steel Corporation discovered his condition and hi control of this stock, his troubles multiplied, and the only ray o hope ever held out to this broker on the verge of bankruptcy was th release to the Steel Corporation of his control of the stock of th Tennessee Coal & Iron Co.

In the event the stock of this company became "uncurrent"—no desirable as a collateral upon which to borrow money—at a tim when Schley had to have money, then the only possible way he coul get it would be to sell the stock outright. It is not clear that th financial interests back of the Steel Corporation made a deliberat "drive" at this stock for that purpose. It seems more probabl that they simply took advantage of the financial distress of Moor & Schley.

Before the Senate committee investigating this merger, Mr. Schle said:

> Senator Overman. So you approached Mr. Ledyard, who wa attorney for Morgan, was he not?
>
> Mr. Schley. I don't know that he was attorney for him; h was a friend.
>
> Senator Overman. I want to ask you whether or not you ha any interest in the United States Steel Co. yourself?
>
> Mr. Schley. Not a dollar.
>
> Senator Overman. Did any of the gentlemen named here?
>
> Mr. Schley. I don't think so. They may have.
>
> Senator Overman. Were they interested as stockholders o otherwise; do you know?
>
> Mr. Schley. I doubt it. I don't think so.
>
> Senator Culberson. Mr. Schley, I understand you to say tha although calls had been made upon your firm, you had alway responded up to the 4th of November, 1907?

Mr. SCHLEY. Yes. When it developed everyone I talked to in connection with his holdings was willing, under the pressure that was brought upon all, to sell that stock at par, and when I went to Mr. Ledyard and asked him to make these negotiations, it began. Then Mr. Frick and Mr. Gary came to me in the course of it, and it developed so that in the following days it was known to the public. I can't tell what would have happened to Moore & Schley or to anybody else in that street, because we were oppressed by rumors, some of them untrue, but Moore & Schley were the subject of attack, serious attack, and their credit, which is the life of the business, was being destroyed. It was a matter of serious import. It had to be disposed of if it could be. I don't mean for Moore & Schley, but for people about them, others interested, not those particular individuals of great wealth.

Senator DILLINGHAM. What was the effect of the purchase of the stock by the Steel Co. upon the market?

Mr. SCHLEY. It relieved the situation most decidedly, not only with M. & S., but with everybody about. The rumors were flying tremendously about, and nobody can escape those, you know. They may be true or untrue, and they affect the credit of this institution or that. It was especially so with us at that time, after this negotiation started, and it took a week. Why, there was $7,000,000 of loans called on us in three days.

Senator CULBERSON. Was it generally known on the Street, as you call it, that your firm, in the relationship that you have suggested, was dealing in the Tennessee Coal & Iron?

Mr. SCHLEY. Yes; for some time it had been talked that Moore & Schley were holding that stock—a wrongly based rumor, because these facts I tell you are absolutely true. But the pressure was there, and I don't know of any panic in a great many years when they have not been pounded a little, and other houses that have real basis behind them.

Senator CULBERSON. You say your relationship to this stock was generally known in the Street?

Mr. SCHLEY. Yes.

Senator CULBERSON. And you say there was special pressure, as I remember your testimony, on your firm?

Mr. SCHLEY. Yes. (Hearings, p. 1126.)

Before the same committee, George W. Perkins testified as follows:

Senator OVERMAN. Why were these special securities mentioned? That was only a drop in the bucket. There were a tremendous amount of securities up.

Mr. PERKINS. Yes, sir.

Senator OVERMAN. Why were those securities mentioned?

Mr. PERKINS. Why does a man call "fire" in a theater?

Senator OVERMAN. I do not know any special reason why these stocks were mentioned.

Mr. PERKINS. I have not the slightest idea. You can never tell why such things occur.

Senator OVERMAN. Were these specially mentioned more than any others?

Mr. PERKINS. At this period of the panic?

> Senator Overman. Yes; these particular stocks.
>
> Mr. Perkins. Yes; it became centered at that particula stage of the panic, which covered three weeks. (Hearings, pp 1126–1127.)

John W. Gates accounts for his loss of control of this property a follows:

> The Chairman. To what extent was this sale forced, and i you know anything about who did the forcing, I wish you woul let me know.
>
> * * * * * * *
>
> Mr. Gates. I regarded it as a forced sale. I had no account myself with Moore & Schley's office. He was not borrowing an money for me on any securities that he was holding as agent fo me; I had no account with him. I had taken up my securitie at the time the transaction took place.
>
> The Chairman. What influences, what financial power was it that forced this sale or that necessitated it? I will not sa "forced it."
>
> Mr. Gates. I do not know the facts, but my surmise would b that the finding of a large amount of Tennessee Coal & Iron a collateral in one of the banks or trust companies.
>
> The Chairman. Did Mr. Morgan have any decided influenc over the attitude of this bank and trust company toward th Tennessee Coal & Iron Co. stock?
>
> Mr. Gates. I do not know. It is pretty hard to tell where a man's influence starts or ends on Wall Street.
>
> Mr. McGillicuddy. At the time this deal was consummated, in November, 1907, whereby the stock of the Tennessee Coal & Iron Works was transferred in exchange for the steel seconds, what, in your opinion, was the total value of the property of the Tennessee Coal & Iron Works?
>
> Mr. Gates. I think I stated that that was problematical.
>
> Mr. McGillicuddy. I want your opinion on it.
>
> Mr. Gates. My opinion is that it was bought at a bargain sale; it was a forced sale on the part of the owners of the Tennessee. (Hearings, pp. 12, 13.)
>
> Mr. Young. And it was true also, was it not, that during the panic the stock of the Tennessee Coal & Iron Co. greatly depreciated because of the situation?
>
> Mr. Gates. Well, I think the stock of the Tennessee Coal & Iron Co., if it had not been unduly depressed, would not have gone down much, *because it was held by a syndicate of men who I thought, and we all thought, could go through any panic and carry their securities.*
>
> Mr. Young. Unless you were mistaken about that, why did they not carry it through instead of selling it at a loss?
>
> Mr. Gates. They discovered a lot of it up as collateral in a bank or trust company.
>
> Mr. Young. What bank was it? I forget the name; it is a matter of public knowledge.
>
> Mr. Gates. The Trust Co. of America. Mr. Thorne was one of the syndicate. The bank is solvent, strong, and the stock selling at $300 or $400 a share.

> Mr. YOUNG. But you say this bank had made application to the clearing house for help?
>
> Mr. GATES. *There was a run on them then by the brokers.* (Hearings, p. 15.)

The "run" on the trust company of which Mr. Gates speaks, was the result of the activities of Mr. George W. Perkins, at that time a member of the finance committee of the United States Steel Corporation and a member of the firm of J. P. Morgan & Co.

On the morning of October 23, 1907, there appeared in the New York Times an article headed "Aid to the Trust Co. of America." This article recites that—

> It has twelve millions, and as much as may be needed is pledged. J. P. Morgan is to help. With other financiers he acts at night meeting with Secretary Cortelyou. The situation clearing. Government aid pledged, and Cortelyou will supervise for the Treasury.
>
> At a conference between Secretary Cortelyou, who came on from Washington in response to a hurry call, and the chief bankers of the city, headed by J. P. Morgan, at the Hotel Manhattan last night, it was formally decided that the point needing buttressing now is the Trust Co. of America, the third largest institution of its kind in the city, and of which Oakleigh Thorne is president.
>
> Earnest attention was given to this new problem, and the result was the formation of a powerful syndicate to stand by the company at its opening to-day.
>
> This determination was announced at 1 a. m. in the following official statement, after Mr. Perkins and President Thorne had been in conference at the Union League Club subsequent to the Hotel Manhattan gathering:
>
> "THE OFFICIAL STATEMENT.
>
> "The chief sore point is the Trust Co. of America. The conferees feel that the situation there is such that the company is sound. Provision has been made to supply all the cash needed this morning. The conferees feel sure the company will be able to pull through. The company has $12,000,000 cash and as much more as needed has been pledged for this purpose. It is safe to assume that J. P. Morgan & Co. will be leaders in this movement to furnish funds.
>
> "A committee has been named, including a representative of Morgan & Co. and others, to look over the accounts of the Trust Co. of America with the idea of definitely determining its position.
>
> "The guaranties of cash made last night are for the purpose of meeting any demands upon the Trust Co. of America, pending the completion of this examination."
>
> After the close of the Manhattan conference one of the chief conferees, a clearing-house committeeman, said:
>
> "I think it safe to say now that no other financial institution of the least importance will have to undergo the experiences of

> the Knickerbocker Trust Co. I feel optimistic for the first ti since these troubles began."
>
> It was also said there was no thought that the Trust Co. America was in anything like the position of the Knickerbocl Trust Co., but these steps were taken with the intention of ma ing an authoritative statement before noon to-day that the Tr Co. will be taken care of in any eventuality, providing conditic are found as sound as there is every reason to believe them to l
>
> That these interests have agreed, pending final examination its accounts, to supply the Trust Co. of America with any ca needed was pointed to as proving the confidence of all intere in the soundness of the company.
>
> Those who were at the Hotel Manhattan conference with M Cortelyou were J. P. Morgan, George F. Baker, George W. P kins, Frank A. Vanderlip, A. B. Hepburn, of the Chase Natio Bank; President Stillman, of the City National Bank; J. Cannon, vice president of the Fourth National Bank, and Sta Comptroller Glynn.
>
> Most of them stayed an hour or more, and Mr. Perkins was t last to leave, not getting away until nearly 12 o'clock. (Hea ings, pp. 1663, 1664.)

In a letter to Mr. Thorne of date of March 18, 1907, Mr. Chas. Boynton gives a detailed account of how and by whom the Trust C of America was declared to be "the chief sore point" among Ne York's financial institutions. The letter is as follows:

> CHARLES H. BOYNTON,
> *7 Wall Street, New York, November 18, 1907.*
>
> OAKLEIGH THORNE, Esq.,
> *President Trust Co. of America,*
> *35 Wall Street, New York.*
>
> MY DEAR MR. THORNE: My recollection as to the stateme given out in the early morning hours of Wednesday, October 2 is quite distinct. About 1 a. m. I went to the Hotel Manhatt for the purpose of having a word with Secretary Cortelyou. T Secretary was standing at one side of the corridor, and I start toward him, but at that instant one of the newspaper men sa "Mr. Perkins is about to give out a statement." The newspap men had gathered about a gentleman who began to dictate them the announcement which began: "Attention had be directed mainly on Mr. Oakleigh Thorne's Trust Co. of America This gentleman I afterwards learned was Mr. Phillips, of t Times. As he began one of the reporters asked, "Is this stat ment to be credited to Mr. Perkins?" Mr. Phillips replie "Don't put it that way, say it comes from one of those who w present at to-night's conference."
>
> Knowing that Mr. Stanley, whom I had left at the Lotos Clu was extremely interested in the outcome of the conference, copied the statement as it was given out for my own purpose and upon its completion hastened to the Lotos Club, where I m Mr. Stanley, and he asked me if I would be good enough to rea the statement to you over the telephone. You were unable

come to the telephone, and in your place I read the announcement to Mr. Perry.

As I came out of the booth Mr. Stanley awaited me, and I started to read the statement to him. I had just begun it when Mr. Perkins came down the stairway, at the foot of which I was standing. I greeted him and renewed the reading of the statement, saying to Mr. Perkins: "You will not be interested in hearing this." He replied: "Yes; read it to me, I wish to see if I can recognize it." Mr. Perkins listened to my reading and made no dissent or correction.

Let me add that I was distinctly of the impression, and I think the newspaper men present also felt, that the statement given out by Mr. Phillips to the newspaper men emanated from Mr. George W. Perkins.

Yours, very truly, CHAS. H. BOYNTON.

(Hearings, p. 1700.)

Mr. Thorne has stated to this committee that this injurious statement was utterly without any foundation in fact and has described its immediate effect upon his bank, the Trust Co. of America.

Mr. LITTLETON. Were you at the conference at the Manhattan Hotel?

Mr. THORNE. I was not.

Mr. LITTLETON. Were you invited?

Mr. THORNE. No, sir.

Mr. LITTLETON. Did you know there was such a conference?

Mr. THORNE. No, sir.

Mr. LITTLETON. Did you know that the Trust Co. of America was being discussed there?

Mr. THORNE. No, sir.

Mr. LITTLETON. Had you been told that the Trust Co. of America would be discussed there?

Mr. THORNE. No, sir.

Mr. LITTLETON. Had anybody suggested to you that its condition was regarded as critical?

Mr. THORNE. No.

Mr. LITTLETON. You say you saw this at half past 8 on the morning of the 23d, when it was brought to your attention by Mr. Hilton. How soon after that was it that you opened the doors?

Mr. THORNE. An hour and a half. We opened at 10 o'clock.

Mr. LITTLETON. On ordinary days, what provision had you for the paying out of money? That is, what physical convenience did you have in the shape of windows—how many?

Mr. THORNE. One.

Mr. LITTLETON. A pay window and a——

Mr. THORNE. A receiving window.

Mr. LITTLETON. What happened when you opened the Trust Co. at 10 o'clock?

Mr. THORNE. Prior to opening the Trust Co. on that morning a line had formed; and the moment we opened, of course, there was a rush to the window.

Mr. LITTLETON. A line had formed on Wall Street?

Mr. THORNE. Yes, sir.

Mr. LITTLETON. Reaching in what direction—toward Bro Street?

Mr. THORNE. No; as I remember, it was turned down towa William Street.

Mr. LITTLETON. Down toward the river?

Mr. THORNE. Yes, sir.

Mr. LITTLETON. Did you see the formation of the line befo the company opened?

Mr. THORNE. I saw the line.

Mr. LITTLETON. How extensive was it?

Mr. THORNE. I should think there were two or three or fo hundred people there.

Mr. LITTLETON. And they were in the order in which peop are who must follow one the other?

Mr. THORNE. Yes; they were in line.

Mr. LITTLETON. Having seen the formation of this line pri to the opening, did you make any provision to accommoda them?

Mr. THORNE. I do not remember whether we made provisic prior to the opening or not—that is, prior to 10 o'clock; but b 11 o'clock or half past 10 we had seven paying windows open.

Mr. LITTLETON. In other words you increased sevenfold tl physical conveniences of paying out money in order to accor modate this line?

Mr. THORNE. Endeavoring to get rid of them.

Mr. LITTLETON. Yes.

Mr. THORNE. Knowing what a line meant, we were endeavo ing to get rid of the line.

Mr. LITTLETON. In other words, if you could have melted u the line, absorbed it once, you felt that the alarm which is infe tious and more or less unreasoning would not be likely to sprea to other people and draw attention to the company?

Mr. THORNE. Exactly.

Mr. LITTLETON. What happened in the shape of the absorptic or diminution of the line?

Mr. THORNE. It increased.

Mr. LITTLETON. It increased; and by 12 o'clock what had amounted to?

Mr. THORNE. It is impossible to say. It extended away dow the street. The street was full of people.

Mr. LITTLETON It was besieging the doors for payment?

Mr. THORNE. Surely.

Mr. LITTLETON. How much money did you pay out that for noon?

Mr. THORNE. I could not divide it between noon and 3 o'cloc We paid out $13,500,000. (Hearings, pp. 1664–1666.)

It is not proposed to analyze the motives of Mr. Perkins in givi currency in the midst of a panic to the statement which ended in disastrous run on this bank, which was, and even under this stra proved to be, absolutely sound and solvent.

There can be no doubt, however, as to one of the effects of successful run upon the Trust Co. of America and the bankrupt of Oakleigh Thorne. His assets would have passed into the hands of his creditors, and among these assets was a large block of the securities of the Tennessee Coal & Iron Co. It is scarcely credible that Perkins could have intended the ruin of the trust company, and yet we can not surely interpret his meaning. We leave it where the record leave it—unexplained.

Thorne weathered the storm without the surrender of the stock. Schley at last consented to throw overboard his securities in this company and with them his associates in the syndicate as the last and only hope of saving his financial craft. After considerable negotiation through Lewis Cass Ledyard with J. P. Morgan, H. C. Frick, Judge Gary, and George W. Perkins, the Steel Corporation agreed to exchange its second-mortgage bonds for the stock of the Tennessee Coal & Iron Co., giving $11,904.76 par value of said bonds for each 100 shares of stock of the par value of $10,000 so delivered. No money changed hands—the bonds aggregating $34,648,977.64. (Hearings, pp. 1123, MacRae Rept., p. 4308.)

It is not surprising that the gentlemen who engineered this deal and who reaped a rich harvest from the strained condition then existing in financial circles in New York, whether they produced that condition or not, did not feel absolutely secure or certain about the ultimate action of those intrusted with the enforcement of the law against combinations in restraint of trade.

This, under the circumstances, most natural apprehension is evidenced by the hurried and unheralded journey from New York to Washington of Judge Gary and Mr. Frick for the purpose of interviewing the President of the United States and ascertaining the probable action of the Department of Justice with reference to the contemplated merger before its final consummation. Mr. Perkins describes the circumstances attending this "hurry call" upon the President:

> Mr. BARTLETT. He left New York at midnight on Sunday night?
>
> Mr. PERKINS. I got the telephone to the White House opened about 9.30 o'clock on Monday morning, and talked with Mr. Loeb, and found that Judge Gary had just come in, and that he and Mr. Frick were with the President. I asked him if he could not find out before time for the trust companies to open and the exchange opened what the President's view was likely to be. Judge Gary came on the phone about a quarter of 10 and said that the President was considering it, and that he would call me again in a few minutes. At five minutes of 10, as I remember it, he came back to the phone and said that the President felt that under all the circumstances he had no right to interfere, and that therefore he and Mr. Frick were willing to report to us that they would come back to New York and vote with the committee to acquire that stock. I immediately let that be known—it was

> just three or four minutes of 10 o'clock—for the effect that
> to have on the trust companies opening and on Moore & Schl
> loans. I simply state that to show you how close, to al
> minutes, this thing had resolved itself to.
>
> Mr. Bartlett. You got into communication with the Ex
> tive Office at about 9.30 a. m.?
>
> Mr. Perkins. Yes, sir.
>
> Mr. Bartlett. And you were informed that Judge Gary
> Mr. Frick were in conference with the President?
>
> Mr. Perkins. Had just come in to see him.
>
> Mr. Bartlett. And about 10 minutes to 10, 20 minutes th
> after, you got this message that loosened up this whole mat
>
> Mr. Perkins. It was very close to 10 o'clock. How long t
> had been with the President at that time I do not know.
>
> Mr. Bartlett. This question, which had troubled your l
> yers and eminent counsel, was decided by the Chief Execu
> in less than 20 minutes? (Hearings, pp. 1605, 1606.)

After *20 minutes'* consultation with Messrs. Gary and Frick,
President penned the following communication to the Attor
General:

> The White House,
> *Washington, November 4, 190*
>
> My Dear Mr. Attorney General: Judge E. H. Gary
> Mr. H. C. Frick, on behalf of the Steel Corporation, have
> called upon me. They state that there is a certain business
> (the names of which I have not been told, but which is of
> importance in New York business circles) which will undoubte
> fail this week if help is not given. Among its assets are a
> jority of the securities of the Tennessee Coal Co. Applica
> has been urgently made to the Steel Corporation to purch
> this stock as the only means of avoiding a failure. Judge G
> and Mr. Frick inform me that as a mere business transac
> they do not care to purchase the stock; that under ordin
> circumstances they would not consider purchasing the st
> because but little benefit will come to the Steel Corpora
> from the purchase; that they are aware that the purchase
> be used as a handle for attack upon them on the ground t
> they are striving to secure a monopoly of the business and
> vent competition—not that this would represent what co
> honestly be said, but what might recklessly and untruthf
> be said.
>
> They further inform me that as a matter of fact the polic
> the company has been to decline to acquire more than 60
> cent of the steel properties, and that this purpose has b
> persevered in for several years past, with the object of prevent
> these accusations, and as a matter of fact their proportion
> steel properties has slightly decreased, so that it is below
> 60 per cent, and the acquisition of the property in question
> not raise it above 60 per cent. But they feel that it is immens
> to their interest, as to the interest of every responsible busi
> man, to try to prevent a panic and general industrial smash
> at this time, and that they are willing to go into this transact
> which they would not otherwise go into, because it seems

opinion of those best fitted to express judgment in New York that it will be an important factor in preventing a break that might be ruinous; and that this has been urged upon them by the combination of the most responsible bankers in New York who are now thus engaged in endeavoring to save the situation. But they asserted they did not wish to do this if I stated that it ought not to be done. I answered that while of course I could not advise them to take the action proposed, I felt it no public duty of mine to interpose any objection.

Sincerely, yours,

THEODORE ROOSEVELT.

Hon. CHARLES J. BONAPARTE,
Attorney General.

After sending this letter I was advised orally by the Attorney General that, in his opinion, no sufficient ground existed for legal proceedings against the Steel Corporation, and that the situation had been in no way changed by its acquisition of the Tennessee Coal & Iron Co.

I have thus given to the Senate all the information in the possession of the executive department which appears to me to be material or relevant on the subject of the resolution. I feel bound, however, to add that I have instructed the Attorney General not to respond to that portion of the resolution which calls for a statement of his reasons for nonaction. I have done so because I do not conceive it to be within the authority of the Senate to give directions of this character to the head of an executive department or demand from him reasons for his action. Heads of the executive departments are subject to the Constitution and to the laws passed by the Congress in pursuance of the Constitution and to the directions of the President of the United States, but to no other direction whatever.

THEODORE ROOSEVELT.

THE WHITE HOUSE, *January 6, 1909.*
(Hearings, p. 1122.)

This letter contains the following alleged statements of fact:

(1) A certain business firm of real importance in New York, having among its assets a majority of the stock of the Tennessee Coal & Iron Co., was about to fail if help was not forthcoming from the Steel Corporation.

(2) Some unknown concern was urgently pressing the Steel Corporation to take over its assets.

(3) The Steel Corporation hesitated to take this stock, since it would derive no benefit from the purchase and would be unjustly attacked if it did so and accused of endeavoring to secure a monopoly as a result of the purchase, which accusation is untrue and unwarranted.

(4) That the corporation had been for years refusing to acquire any more steel property for fear it might get more than 60 per cent of the business.

(5) That the responsible bankers of New York, acting in cor were imploring the Steel Corporation to take over this property at a loss to prevent a "general industrial smash up."

Such were the representations made by Messrs. Frick and to the President of the United States during this brief 20-m interview.

As to the existence of this unknown business of great import which was alleged to have had a majority of the assets o Tennessee Coal & Iron Co.:

There was no concern in the city of New York of any import which had among its assets a majority of the stock of the Tenn Coal & Iron Co. or which would in any way have been affected b exchange of such stock as it did have for any other stock. President was evidently laboring under the impression that some financial institution burdened with its load of Tennessee Coal & securities was tottering to its ruin and about to "smash up" concerns by its fall.

Now the evidence before this committee shows that the maj of this stock was locked up in the strong boxes of Oglebay, Ha Gates, and others, no one of whom was in any way involved.

> "There was probably no floating stock," says Gates, "it so closely held by the people who had bought it for an in ment. There was practically no stock in the hands of the kers." (Hearings, p. 16.)

Out of over 300,000 shares, Kessler and Schley held only about 4 or 50,000 shares that had not been "pegged" by the men who eagerly and vainly endeavoring to keep it out of the hands of sp lators and jobbers whose misfortunes or greed might render th prey to the Steel Corporation or some other concern bent on sec control of a property which the syndicate considered almost in able. Even the firm of Moore & Schley which was the only co affected by this deal, never owned a share of this stock.

> Mr. LITTLETON. Did Kessler or any other customer who bought stock through Moore & Schley so default in the pay of their margins or the calls made on them that Moore & S had to take the stock?
>
> Mr. SCHLEY. Moore & Schley never owned any.
>
> * * * * * * *
>
> Mr. LITTLETON. Just prior to the panic, how much stock you have of the Tennessee Coal & Iron Co.?
>
> Mr. SCHLEY. In 1907?
>
> Mr. LITTLETON. Yes. I understand Moore & Schley neve any stock of the Tennessee Coal & Iron Co.
>
> Mr. SCHLEY. Moore & Schley never owned any stock o Tennessee Coal & Iron Co.
>
> Mr. LITTLETON. I say I understand that to be the fact.
>
> Mr. SCHLEY. Moore & Schley are not speculators. They d own securities. (Hearings, p. 1059.)

Schley as an *individual* speculator in stocks had become involved, and having $6,000,000 or $7,000,000 of current securities, the property of O. H. Payne, in his possession, had hypothecated them to save his imperiled credit, and had afterwards given Payne "uncurrent" securities in their stead. He had also a large amount of the stock of the Tennessee Coal & Iron Co. which he was obligated not to dispose of except under the terms of a syndicate agreement designed to keep those stocks from becoming a speculative security. The Trust Co. of America did not then and never did hold a majority of the securities of the Tennessee Coal & Iron Co., and was in no way, directly or indirectly, affected by this proposed merger, except that the president of the company had obtained 12,500 shares of stock which he had purchased as an investment and which he was not attempting to sell to the Steel Corporation or anybody else.

Mr. LITTLETON. Did you pay for your stock?

Mr. THORNE. I did.

Mr. LITTLETON. Did you take it away from Moore & Schley?

Mr. THORNE. I did.

Mr. LITTLETON. And put it among your securities?

Mr. THORNE. I distributed it—practically 7,000 shares—and kept the balance—distributed it among the people who took it and paid for it.

Mr. LITTLETON. But so far as Moore & Schley were concerned the transaction was clean-cut, was it not?

Mr. THORNE. Yes, sir.

Mr. LITTLETON. You owed them nothing, and they owed you nothing?

Mr. THORNE. That is correct. The stock had been delivered and paid for.

Mr. LITTLETON. The purchase of that stock was entirely a personal matter of your own?

Mr. THORNE. Absolutely.

Mr. LITTLETON. And the Trust Co. of America had nothing to do with it?

Mr. THORNE. It never owned a share.

Mr. LITTLETON. At the time of or a little before the panic of 1907, did Moore & Schley owe the Trust Co. of America a loan of some sort?

Mr. THORNE. Yes—in 1906, if I remember correctly; and their loan was paid in 1907.

Mr. LITTLETON. Do you know the amount of their loan in 1907?

Mr. THORNE. I do not. It was either $250,000 or $500,000; I do not remember which.

Mr. LITTLETON. Do you know in what way their loan was secured?

Mr. THORNE. Yes; it was secured principally by American Tobacco securities. I do not know whether there was any Tennessee Coal & Iron in it or not.

> Mr. LITTLETON. Just prior to the panic, was there a loan your Trust Co. to support which there were put up a conside number of shares of the Tennessee Coal & Iron Co.?
>
> Mr. THORNE. May I ask you this—do you mean whether was a loan with the Trust Co. that additional collaterals were up to strengthen?
>
> Mr. LITTLETON. Yes; any way in which the Tennessee Co Iron stock was concerned.
>
> Mr. THORNE. That is not correct. The loan that we ma Moore & Schley was made and was paid off, and there never any change in the collateral during the time we held it. In words, we never asked them for any additional collateral, never needed any additional collateral.
>
> Mr. LITTLETON. To clear up that question finally, was any obligation of Moore & Schley to your Trust Co. prior to panic, or prior to your difficulties, in which you either acq or demanded additional securities?
>
> Mr. THORNE. No, sir.
>
> Mr. LITTLETON. Was there among your loans, prior to panic, some of the Tennessee Coal & Iron stock?
>
> Mr. THORNE. There was.
>
> Mr. LITTLETON. Were those loans of Moore & Schley?
>
> Mr. THORNE. No, sir.
>
> Mr. LITTLETON. They were other loans?
>
> Mr. THORNE. Other loans.
>
> Mr. LITTLETON. How much of the Tennessee Coal & Iron s was there among the collaterals of your Trust Co.?
>
> Mr. THORNE. There was no Tennessee Coal & Iron stock an the collaterals of the Trust Co., other than as collaterals to lo
>
> Mr. LITTLETON. That is what I mean.
>
> Mr. THORNE. I testified to that in detail before the Senate c mittee, and I have forgotten the exact figures.
>
> Mr. GARDNER. Your testimony was that $482,700 was lo to six individuals.
>
> Mr. THORNE. That is correct. (Hearings, pp. 1654 and 16

Schley states he could not borrow money on this "pegged" stock sole collateral and that it was simply used as the "sweetener" in s of his loans aggregating $38,000,000 on stocks of every descript He used other industrials in the same way and at this time ha about as much American Tobacco Co. stock as Tennessee Coal & I

> Mr. LITTLETON. Do you think that in those loans that M & Schley had with the various banks there was any more nessee Coal & Iron up than there was Tobacco?
>
> Mr. SCHLEY. I do not think there was as much in the t Yes; there was more. I should think about the same, or haps a little more Tennessee than Tobacco.
>
> Mr. LITTLETON. Substantially the same?
>
> Mr. SCHLEY. Yes. (Hearings, p. 1088.)

Out of an indebtedness of $38,000,000 he had secured not to ex $6,000,000 or $7,000,000 on this Tennessee Coal & Iron. "I ca lated," says Schley, "50 per cent; 50 per cent was about all tha could average." (Hearings, p. 1054.)

Even such loans as were "sweetened" with Tennessee Coal & Iron stock at the rate of 50 cents on the dollar had not endangered to any extent the stability of the Trust Co. of America.

Neither the solvency of the Trust Co. of America nor of any other bank in New York was in any way affected by the presence of Tennessee Coal & Iron stock, sprinkled through its collateral as a sort of "sweetener." It appears from the testimony of Schley, the only man who was using this stock as a basis of credit, that it was in no instance the sole security for a single loan in all his thirty-eight or forty million dollars of indebtedness. Yet the President of the United States was led to believe that a great bank, its assets gorged with these indigestible securities, was about to collapse if the steel company did not immediately exchange them for its bonds.

> "Mr. Frick and Judge Gary both spoke to me," says Col. Roosevelt, "I can not of course remember who it was that made any given statement, and I can not pretend at this time, the events being nearly four years in the past, to give with verbal accuracy what they said—to this effect: That they were urged by various representatives of the big business interests in New York to acquire the Tennessee Coal & Iron property, because the Tennessee Coal & Iron securities were assets in, I think they only told me, one big trust company—but I had previously been informed that there were two such trust companies, but that the Tennessee Coal & Iron properties were assets, and a very large proportion of the assets, of a certain big company which was threatened with failure—and they were firmly convinced that it would fail if nothing were done, because those securities had no market value at the moment." (Hearings, p. 1373.)

The run on the Trust Co. of America had occurred in October, and at the time Judge Gary and Mr. Frick visited the President was, as is testified by Mr. Thorne, in no danger or trouble whatever.

The President was advised that some unknown concern was urgently pressing the Steel Corporation to take over its assets. After the most thorough and exhaustive examination of every witness thought to be cognizant of the details of this transaction subject to the subpœna of this committee, it has been unable to ascertain any bank or trust company in the city of New York which ever urged the Steel Corporation to take over the Tennessee Coal & Iron Co. as its only salvation or that was embarrassed by the presence of the Tennessee Coal & Iron Co. securities among its assets. Thorne expressly stated that his bank was neither helped nor hurt by this merger. It was neither a bank nor a firm, but a single individual, a stock broker in New York who had become involved by using in the stocks of O. H. Payne which had been purchased outright and left in his keeping, and in the stocks of the Tennessee Coal & Iron Co., which had been "pegged" and tied up for the purpose of preventing the very speculation in which he was indulging.

It appears that Schley had never borrowed a dollar upon this s as the sole security and that he could not borrow one dollar.

> Mr. Littleton. In 1905 and 1906 was there any loan wl supported by Tennessee Coal & Iron?
> Mr. Schley. With Moore & Schley?
> Mr. Littleton. Yes.
> Mr. Schley. I do not know of any.
> Mr. Littleton. You do not know of any?
> Mr. Schley. No.
> Mr. Littleton. And was it your practice in 1905 and to put in the Tennessee Coal & Iron stock substantially in manner you have described already, as a part of the 30 per of industrial stock?
> Mr. Schley. Yes.
> Mr. Littleton. That was true long before the panic ever c on?
> Mr. Schley. That was true of all our industrials. (Hear pp. 1063-1064.)

Even if it had been necessary for Mr. Schley to realize immedi upon the Tennessee Coal & Iron stock which he had hypotheca his financial distress could easily have been relieved by the Ur States Steel Corporation without the absorption of the Tenn Coal & Iron Co. This Schley unequivocally admits. What Schley needed was not the removal of Tennessee Coal & Iron stock f *his* loans, *but money to pay his debts.* He states that he had o stocks, American Tobacco Co. stocks, Republic Iron & Steel, any number of other industrials which were to a greater or less de unsalable, just as the Tennessee Coal & Iron stocks were, and exchange of the steel company's bonds for any of these stocks w have served the purpose just as well.

> Mr. Littleton. Why was it any more necessary to exch the stock of the Tennessee Coal & Iron Co. for the sinking-f bonds of the Steel Corporation than it was to exchange the s of the Republic Co. or any other of the industrials which for the 30 per cent of these loans, and get in exchange somet like the United States sinking-fund bonds, as you did to n tiate the sale of the Tennessee Coal & Iron stock for those bo
> Mr. Schley. It was not. (Hearings, p. 1073.)

The Steel Corporation had already loaned Schley over a mi dollars on these very same stocks, and they had the same authori exchange six for seven millions as they had to exchange for one.

The loan of four or five millions of the steel company's bonds, Mr. Schley, would have served the purpose quite as well as merger of the company of which he was syndicate manager.

> Mr. Littleton. If the steel company would lend you $5,000,000 or $6,000,000 which it is said in the record they w have loaned, and which you said would have made you ha that would have made you happy?
> Mr. Schley. Yes, sir. (Hearings, p. 1089.)

Judge Gary admits this could be done, and, what is more, admits it could have been done without embarrassment to the Steel Corporation. It is easy to understand how little embarrassment it would have caused the Steel Corporation since the second-mortgage bonds which were exchanged for Tennessee Coal & Iron stock were treasury stock in the vaults of the Steel Corporation, and by the exchange of these securities the Steel Corporation was out not a single dollar by this transaction.

> Mr. LITTLETON. You could have loaned the bonds without any embarrassment to the Steel Corporation, could you not?
> Mr. GARY. We could.
> Mr. LITTLETON. And if the bonds when exchanged were the means of saving Moore & Schley they would have been just as efficient means when loaned, would they not?
> Mr. GARY. They would.
> Mr. LITTLETON. And therefore the purchase of the Tennessee Coal & Iron Co. would have been wholly unnecessary in that particular view of it?
> Mr. GARY. I should think so. (Hearings, p. 170.)

If, as Mr. Frick maintained, Tennessee Coal & Iron stock was not worth more than 60, it is inconceivable that the United States Steel Corporation would exchange its bonds for over three hundred thousand shares of Tennessee Coal & Iron stock at par, incurring loss to their stockholders of over twelve millions of dollars, when the same result could have been obtained by a loan of five million, secured by the same stock, especially in view of the fact that Judge Gary said they had the authority to make this loan and that they could have made it without embarrassment, and that they had already turned over to Schley over a million dollars of bonds, and had selected these securities out of all the stocks of Schley as the most desirable indemnity against any loss resulting from the exchange. Judge Gary maintains that the steel company, in the hope of staying a disastrous panic and securing the return of confidence and peace to the community, incurred a financial loss and submitted to unjust persecution, which they anticipated as a result of this merger.

The value of the Tennessee Coal & Iron Co.'s stock is the crux of the whole controversy. If the securities of this company were not worth more than thirty-five or forty millions of dollars to the Steel Corporation, then it had no motive in refusing to relieve the necessities of Schley without the surrender of his stock in this company; and it might reasonably be maintained that the "hammering" of his firm in the street and that the run on the bank of Oakleigh Thorne were in no way inspired or encouraged by the powerful interests behind the Steel Corporation. If, however, this concern was a formidable competitor, if its existence threatened the supremacy of the Steel Corporation in the South, and if its vast holdings were infinitely more valuable than the second mortgage bonds by which they were obtained, the Steel Corporation was the immediate beneficiary of Sch embarrassment and would have been an eager bidder had the secu of Oakleigh Thorne gone under the hammer.

Nobody knew better than the directors of the Steel Corporatio actual value of these properties to the Steel Corporation. In a st ment to their stockholders they frankly admit the great value of property.

At page 29 of this report the following is found:

> In November, 1907, the corporation acquired a majorit the common stock of the Tennessee Coal, Iron & Railroad as is set forth in detail on page 25 of this report. The purc was made during the financial panic of October, 1907. parties owning or controlling a majority of the Tennessee stock offered the same to the corporation on terms w were satisfactory both as to price and manner of paym The purchase of the property promises benefit to the co ration and also aided promptly and materially in relie the financial stress at the time existing. The Tennessee p erty is very valuable. Its mineral resources are large. location of the iron-ore and coal deposits in the immed proximity of the manufacturing plants enables the productio iron at reasonable cost. It is believed the lines of busines the Tennessee Co. can be materially extended. (Heari p. 1133.)

At the time of this transaction Mr. Gates in a published inter said:

> As to the purchase of the Tennessee Coal, Iron & Railroad by the United States Steel Corporation, the steel men got best property in the country, and at a bargain price. I re it as a sacrifice of stock worth a great deal more than the chase price. I did not want to sell my stock, but had to fo the crowd. Had Tennessee stock been thrown on the mark would have been better off, as I could have increased my h ings at a low price. The iron-ore and coal deposits of the nessee Co. are worth many times more than the entire cost of property to the Steel Corporation. (Hearings, p. 10.)

When questioned as to the accuracy of this statement, Mr. G replied:

> That I would be willing to make an affidavit to to-day, in opinion; it is purely an opinion.

If Col. Roosevelt believed that this property was purchased loss to the Steel Corporation, it could only have been due to an a lute lack of any accurate information with reference to the exten value of the Tennessee Coal & Iron Co.'s holdings.

The New York Sun, on November 7, 1907, said:

> The acquisition of the (Tennessee) company is particul advantageous to the Steel Corporation, because of the iron and coal properties that go with it. With the Great Nort

> and Northern Pacific ore lands acquired last year, together with the previous holdings, the Steel Corporation now has iron-ore deposits estimated at approximately 2,400,000,000 tons, of which approximately 700,000,000 tons come with T. C. & I. (Hearings, p. 1129.)

Mr. John Moody, writing for Public Opinion, October 16, 1908, said:

> The possibilities of the Tennessee property and the value of its raw materials are so gigantic that even if it were producing nothing at the present time it would have been the best bargain at $45,000,000 that the Steel Corporation or any other concern or individual ever made in the purchase of a piece of property.
>
> The Steel Corporation, 15 months ago, entered into a lease with the Great Northern Railway interests whereby it has the right to mine at so much per ton the vast ore deposits of the Great Northern properties. The Steel Corporation agreed to pay to the Great Northern people $1.65 per ton for this ore, and transport a portion of the ore over the Great Northern tracks at a specified rate. The Great Northern ore bodies are estimated to contain about 500,000,000 tons of good ore, which, if all mined and taken by the Steel Corporation at $1.65 per ton. would make an ultimate cost to the Steel Corporation of about $850,000,000, without considering cost of transportation, etc, As stated in the Steel Corporation report for the year 1906, this contract was looked upon as a good one from the standpoint of the Steel Corporation.
>
> The object in giving the foregoing details is to bring out a vivid comparison of the Great Northern deal with that made last winter in the acquisition of the Tennessee Coal & Iron Co. The Great Northern properties, containing probably 500,000,000 tons of ore, will ultimately cost the Steel Corporation about $850,000,000; but the Tennessee Coal & Iron properties, which are of far more value than the Great Northern properties probably ever can be, cost the Steel Corporation only $45,000,000.
>
> To demonstrate the foregoing statements, let reference be had to the following from the annual report of the Tennessee Coal & Iron Co. for the year ending December 31, 1904. In that report Mr. Bacon, the chairman of the board, said:
>
> "Early in the summer of 1904 a committee of appraisers was appointed, representing the Sloss-Sheffield Steel & Iron Co., the Republic Iron & Steel Co., and this company, to estimate the amount and quality of the coal and iron ore owned by each company. An examination covering several months was conducted, as the result of which a report signed by every member of the committee was submitted, showing that this company owns in fee over 395,000,000 tons of red ore, of which 381,000,000 tons are graded as first class, 10,177,000 tons of brown ore, and over 1,623,000,000 tons of coal, of which 809,112,000 tons are coking coal. In the coking coal is included 300,000,000 tons of Cahaba coal, which is unexcelled in the South for steam and domestic purposes, and commands the highest market price of any grade of coal in the district. The men in charge of our iron mines estimate the holdings of iron ore of the company to be still larger, viz, of first-class red ore, over 450,000,000 tons; of second-class red ore, over 95,000,000 tons; and of brown ore, 16,900,000 tons."

From the above it will be seen, figuring the first-class ore low an amount as $1 per ton, that the valuation for that alo $395,000,000. If we disregard the aggregate estimate of coa simply take the estimate for coking coal at as low a figu 50 cents per ton, we get a valuation of $400,000,000 more very conservative estimate of the values of the ore and deposits of the Tennessee Coal & Steel Co. at the present ti hardly less, in all probability, than $1,000,000,000.

Now, as far back as 1901 Mr. Schwab made the statement the coking coal deposits of the Steel Corporation were of value, because of the fact that coking coal of the kind neede blast furnaces was rapidly growing scarce, and that in a years there would probably be no more. He disregarded Tennessee properties, undoubtedly, but by this great acquis the Steel Corporation has been put in a position where it have no concern for the future as far as coking coal is conce In fact, the acquisition of the Tennessee Coal & Iron Co., from being a business stroke of enormous direct profit, has the effect of rounding out and completing the control by the poration of the ore and coking-coal supplies of the country.

That acquisition is of more value to the Steel Trust, and be in the future in many ways, than its holdings of Lake Sup ores, both because of location and because of general char and quality of the deposits.

It is well known that the Tennessee iron-ore deposits are best in the world for making pig iron; and the cost of pro tion and manufacture of iron products in that section is cons ably less than is the case in the Great Northern ore bo Therefore it can be easily demonstrated that the acquisitio this property for $45,000,000 added an almost unheard of v to the equity back of the Steel Corporation stocks.

Many people have wondered and are still wondering wh the face of temporarily poor earnings and in the face of t agitation, the Steel Corporation stocks, both common and ferred, have been steadily rising since last December, and now almost at the highest figures of their history. The going demonstration certainly accounts for it.

If it were not for the danger involved in tariff agitation, Steel Corporation common stock would probably be selling to at nearly double its present value. In other words, instea having a market price of $45 per share, a total market val about $220,000,000, it would be selling in the neighborhoo $90 per share, with a total market value of $450,000,000. could easily reach this point in spite of the fact that the corp tion may not pay any larger dividends for several years to c

The appraised value in 1904 of the Tennessee company's p erties, as quoted above, was that of a thoroughly impartial unanimous board. This appraisal must have been know Mr. Morgan and the rest of his party when the property taken over by the Steel Trust at the absurdly low price paid. If they checked the panic by this transaction, they it by taking a few dollars out of one pocket and putting mill into another. (Hearings, pp. 1130–1131.)

It appears that the Steel Corporation was anxious, not without cause, that the public should know the extent to which the actual values of its own inflated stocks had been increased by the acquisition of its great competitor. Mr. Frank A. Munsey, editor of Munsey's Magazine, was given access to the records of the Steel Corporation in order that he might publish a full and accurate inventory of its vast properties. When before the Ways and Means Committee Judge Gary was questioned as to the accuracy of this article. Judge Gary said:

> This is the result of an independent examination by Mr. Munsey concerning the value of our properties. He gives the properties in detail, and his valuation, and if anything I would say that it is a little too high, but it is not very much too high, and certainly properties could not be reproduced for anything like that; in fact, it would be impossible to reproduce them at any price, perhaps some of them. (Hearings, p. 1132.)
>
> "The Tennessee Coal & Iron Co.," says Mr. Munsey, "is entered as a separate item in this inventory. Its ore and coal and mills and furnaces and other properties are not included in the other classifications. This company is put in at an estimated value of $50,000,000, which is somewhat more than the Steel Corporation paid for it, but probably a much smaller sum than it is worth to the Steel Corporation. Its chief value lies in its coal and ore properties. Its ore is estimated at 700,000,000 tons. It is not as high grade ore as the northern ore; but assuming that it is worth 15 cents per ton, it alone would amount to $105,000,000. Its coal is estimated at about a billion tons, which at 10 cents a ton would be $100,000,000. From the fact that the known supply of ore in the country is limited, it may be worth two or three times this price. There is no way of telling just what it is worth. But as a guide to the value of ores, we may take the price fixed upon for the Great Northern ores between James J. Hill and the Steel Corporation. The Great Northern Railroad and the Northern Pacific had vast holdings of iron ore in the Messabe Range, and after many months of negotiation the Steel Corporation entered into a contract a year ago to take all this ore at a certain price per ton, the price to be advanced each year over the preceding year 3.4 cents. The first year's price, which covered the year 1907, was 85 cents a ton. This year it is 88.4 cents a ton. On this basis the price will soon be over a dollar a ton, and the average cost for the entire supply will be considerably in excess of that figure. And this ore is supposed to be of a lower grade, as a whole, than the ore owned by the United States Steel Corporation, which in this inventory has been conservatively—ultraconservatively—figured at 60 cents a ton. If the Hill ore is worth over a dollar a ton, the ore of the Steel Corporation is worth quite as much, and even more, as it is of a better grade. And these prices of this Northern Pacific ore have an important bearing on the ore properties of the Tennessee Coal & Iron Co. I should think that Mr. Charles M. Schwab is as good an authority as there is in the world on the value of iron ore. He said to me two or three days ago that the ore holdings of the Steel

> Corporation were easily worth a dollar a ton, and, in fact, m safely and conservatively be regarded as worth still more, for reason that they can not be duplicated. (Hearings, pp. 1 and 1132.)

It is the opinion of a majority of the Senate committee, to wl reference has previously been made, that—

> To sum the matter up briefly, we think the property is valuable, worth probably several hundred million dollars, that among the larger benefits which the Steel Corporation der from the merger are the control of the open-hearth output of s rails, the ultimate control of the iron-ore supply of the coun the practical monopoly of the iron and steel trade of the So and the elimination of a strong and growing competitor. (H ings, p. 1134).

Judge Gary maintains that the ores in the Birmingham region incomparably less valuable than the ores of the Lake Superior reg It is true that the Lake Superior ores contain a much higher perc age of iron than the southern ores, Superior ores running from 5 60 per cent of iron. The value of iron ores, however, can not determined arbitrarily by the per cent of iron which they cont The facility for assembling them and the percentage of lime in ores is as essential a factor in determining value as the iron cont An expert knowledge of the subject is not necessary to an understa ing of the uselessness of such an arbitrary classification.

Ores have no other value than the production of iron, and that is most valuable, of course, which can be most easily and chea converted into pig iron at some point where there is a market fo

All Lake Superior ores must be mixed with limestone before t can be smelted. Roughly speaking, 25 parts of limestone must quarried and transported to the blast furnace and there mixed each 100 parts of iron ore before the same can be "fluxed" prope The percentage of iron in this "fluxable mixture" is necessa reduced in proportion to the amount of limestone that is added t The Lake Superior ores contain no limestone. In the Birmingl district nature has to a great extent relieved the furnace man of labor and expense incident to the mining and mixing of limest with iron ores. A great part of the Birmingham ores are known "self-fluxing" ores. This is explained by Mr. Perrin and F Grasty in their testimony before this committee.

> The CHAIRMAN. Are any of these ores self-fluxing ores?
>
> Mr. PERIN. Most of the ores of the second and third class self-fluxing.
>
> The CHAIRMAN. What do you mean by self-fluxing ores?
>
> Mr. PERIN. In my previous dissertion on iron smelting referred to this sandy material, this siliceous material, whic known as an acid, and which has to have added to it a b These ores carry a base in the shape of limestone which will t care of the acid material which the ores carry with it. In o

words, when you mine a ton of iron ore you also mine enough limestone to take care of the earthy material contained in the iron.

The CHAIRMAN. And where they are found mixed together by nature, you mine both at the same time; and if they are not mixed together by nature, you must mine them at separate times?

Mr. PERIN. Yes.

The CHAIRMAN. Now, for example, say you have the highest grade Bessemer ore—60 per cent iron—how much limestone do you put with that—25 per cent approximately?

Mr. PERIN. Assuming the same type of fuel is used——

The CHAIRMAN (interposing). Yes; I mean taking the same character of fuel.

Mr. PERIN. Suppose we take standard Connellsville coke in each case, you use approximately a quarter of a ton of limestone.

The CHAIRMAN. Using the same smelting material, the same coke, in 2,000 pounds of material, you would have 1,500 pounds of ore and 500 pounds of limestone?

Mr. PERIN. Approximately. (Hearings, p. 982.)

Mr. GRASTY. You mean, as I understand you, that the Lake Superior ore, while much higher in metallic content than the southern ore, when the limestone is added for fluxing it, as a matter of fact you really reduce the percentages of iron, because you add two things, you mix it together, and you consequently reduce the percentage of iron.

The CHAIRMAN. In other words, it is not scientifically correct to say, for the purpose of making iron, that those limy ores in this district are 33⅓ per cent iron and leaving the furnace there is 66⅔ per cent of useless material in the making of iron?

Mr. GRASTY. No.

The CHAIRMAN. If you have to have 20 per cent of limestone put in the furnace to fuse the Superior ore, it is just as much an essential part of the iron-making material as the iron itself, or the coke?

Mr. GRASTY. It is; yes. That point is well taken, I think.

The CHAIRMAN. And, if I understand you, you have to mix this iron artificially with Superior ores?

Mr. GRASTY. Yes.

The CHAIRMAN. How much limestone do you have to put in the furnace with a ton of Superior ore?

Mr. GRASTY. I don't know about that; I think about one-quarter. I am not positive at all. I can not tell you exactly.

The CHAIRMAN. About 25 per cent.

Mr. GRASTY. Yes.

The CHAIRMAN. How much do you have to put with your limy ore?

Mr. GRASTY. Sometimes a very small quantity; sometimes none at all.

The CHAIRMAN. Over 10 per cent?

Mr. GRASTY. No; I should say not.

The CHAIRMAN. Then you can put in 15 per cent more ore into the furnace of the same size when using Birmingham ore than you can a furnace of the same size where you use Superior ores?

Mr. GRASTY. Roughly; yes. (Hearings, p. 5320.)

It will be seen from the testimony of these experts that a "fluxi mixture," artificially made by the commingling of 50 per cent Super ore and limestone, is in its iron content the exact equivalent of "self-fluxing" Birmingham ore containing 40 per cent of iron.

As has been shown, these ores meet a still more practical t That is, the raw materials essential to the making of a ton of pig i can be assembled and smelted at Birmingham for from three to f dollars less per ton than at Pittsburgh. The Steel Corporation capitalized its ore deposits at a valuation of $700,000,000. It ma tains that these ores are worth from 40 to 60 cents a ton at the low estimate. The committee places no such value upon the Lake Super ore. Assuming that the estimates made by Nelson and other interested holders of iron ore in the Lake Superior region are corre that Superior ores containing 50 per cent of iron are worth not exceed 10 cents per ton, then the Birmingham ores, containing 40 cent of iron, are as valuable for all practical purposes. Assuming that Tennessee Coal & Iron Co.'s holdings are only worth half that amou even at 5 cents per ton the 700,000,000 tons of ore held by this co pany are worth all that the entire property cost the Steel Corporati to say nothing of 1,600,000,000 tons of coal, the Birmingham South Railroad, and $11,000,000 in blast furnaces, steel mills, and ot improvements. The contention of the Steel Corporation that it to over this property at a distinct loss is absolutely untenable.

The President was advised that the Steel Corporation control not exceeding 60 per cent of the business and was determined not increase that control.

The President seems to have regarded the United States St Corporation simply in the light of a manufacturer of finished mate and never to have considered the extent of its holdings of raw ma rial or the effect of that holding upon the steel industry.

> The Chairman. Col. Roosevelt, you say they told you that would not increase their output, their control of finished a semifinished product, over 4 or 5 per cent. Did I understa you correctly?
>
> Mr. Roosevelt. I would be unable to say whether they u the words "output" or "finished product." Exactly what the expression that I used in my letter to Mr. Bonaparte as the proportion of the holdings?
>
> Mr. Bartlett. "Control," I think it was.
>
> Mr. Roosevelt. The statement was made generally that th policy had been to have less than 60 per cent of the total st holdings in the country. I am a little doubtful. You see it four years ago, Mr. Stanley. My memory is that they said t would not increase their holdings to more than 60 per cent; a that some other information at the time was given me to effect that it would change it from 58 to 62 per cent, but difference was trival.

> The CHAIRMAN. Four or five per cent?
>
> Mr. ROOSEVELT. Four or five per cent; something like that.
>
> The CHAIRMAN. Was it your impression from what they said that they were buying some steel mills in Alabama belonging to the Tennessee Coal & Iron Co.—plants?
>
> Mr. ROOSEVELT. That they were buying the Tennessee Coal & Iron plant.
>
> The CHAIRMAN. Plant. Did they say anything to you about the ore properties that they were buying at that time?
>
> Mr. ROOSEVELT. They did not go into detail at all. (Hearings, p. 1379.)

The corporation's control over the iron and steel industry can not be measured by its output of finished material. If this corporation with its present ore holdings and its transportation facilities should divest itself of all the finishing mills it now holds, its mastery of the business and its control of prices would not be appreciably affected. In any effort to ascertain the effect upon the iron and steel industry by the absorption of the Tennessee Coal & Iron Co., it is as futile to discuss the value of its blast furnaces and rolling mills as it would be to make an inventory of the approximate cost of the blacksmith shops on the Mesabi Range. All the raw material in the Birmingham district, with the exception of from 2 to 5 per cent, were held by steel companies. The only way to get a foothold in this district was to absorb some existing concern. The Steel Corporation had no holdings in that whole southern region. It was the ore and the coal that the Steel Corporation needed and it was the ore and the coal that it was after, and yet in their conference with the President the real transaction was never mentioned, and after his interview with Messrs. Gary and Frick, as evidenced by Col. Roosevelt's statement before this committee, he was still under the impression that the *Steel Corporation had bought some "plants"* in the Birmingham district.

It is surprising that the Steel Corporation's rapid and extended control over natural resources had up to this time entirely escaped the attention of the President. Any investigation of this corporation's affairs, however casual, would have revealed it. In the report recently issued by the Commissioner of Corporations this company is expressly charged with a monopoly of the ores and transportation facilities in the Lake Superior district, and the use made of that monopoly is unequivocally condemned.

Mr. F. J. MacRae, in his report to this committee, has filed a list of documents furnished by the Steel Corporation to the Commissioner of Corporations covering over 70 printed pages. Judge Gary testifies that the Government was furnished with tons of data covering every detail of their business and at an expense of several hundred thousand dollars. Among other things, it is manifest that the Bureau of Corporations was advised as to the location and extent of the mines

and ore holdings of the Steel Corporation. It appears that the C
missioner of Corporations had been investigating this company si
1896. On June 26, 1906, at a meeting of the executive commit
at which Messrs. Gary, Frick, Rogers, Morrison, Perkins, Conve
Gayley, Hughitt, J. D. Rockefeller, jr., Corey, Baker, Natha
Thayer, and Griscom were present, Judge Gary made the follow
statement:

> At the last session of Congress a resolution was passed
> both Houses asking the commissioner to investigate the Uni
> States Steel Corporation. The commissioner did not pay
> attention to that resolution; but soon after Congress adjour
> he appeared at this office and stated that he believed it
> his duty to know the general purposes in detail of our busin
> about our corporation, its capital stock, its liabilities, its ass
> the amount of its business, the costs of production, and
> methods generally. After considering the question very c
> fully our finance committee seemed to think that it was g
> policy, and, perhaps, advisable, to aid the commissioner
> making his investigation; and the investigation has been go
> on more or less since that time. As stated, however, by
> deputy commissioner, we decided to furnish the informat
> that was requested at our own expense and by our own la
> The questions which have been asked are very numerous, v
> searching, and very comprehensive, and we have undertaken
> answer these questions in detail. They involve a great dea
> labor on the part of our officials, and of the subsidiary compa
> particularly—so much so that, with respect to many subje
> the representatives of the department have said that they wo
> not have the time to go over it if we went further into detai
> covered a longer period.
>
> I am making this explanation because you are interested i
> and because you may be more or less disturbed without reas
> The finance committee has been in close touch with the ma
> all the time. We have been in frequent and almost const
> communication with Commissioner Garfield, and more or less v
> the President himself, concerning these matters. Up to
> they have made no complaint of us whatever; but we do
> know any better than you do what may be the future. We
> trying to be frank and accommodating to the department,
> we suppose we have an understanding that we will not
> unnecessarily injured and that we will not be wrongfully char
> without having an opportunity to show the facts. We have s
> nothing to show us that we need anticipate any trouble. Q
> likely in some respects we may be traveling very near the
> between propriety and impropriety. (Hearings, pp. 3885–38

Having already obtained control of the Lake Superior ores
was vitally important that this concern above all others should
preempt the only other supply of available ores on the contin
In this case, however, the President did not ask nor did the C
missioner of Corporations proffer any information whatever.

As to the contention that the President and the Steel Corporation prevented "a general industrial 'smash-up,'" it is stoutly maintained by Col. Roosevelt and by Judge Gary that the advantage in the "sweetening" of Grant B. Schley's obligations—that is, the substitution of steel bonds for Tennessee Coal & Iron stock in about six or seven million out of thirty-eight million dollars of loans—prevented the most disastrous panic of recent times. Col. Roosevelt when before this committee graphically describes the terrific financial cataclysm in which he played so conspicuous a part:

> Mr. Littleton. I am endeavoring to find out how accurately and truthfully the real situation in the Street was represented to you, and how truthful it was, that it was necessary to have these exchanges of stock in order to save that situation.
>
> Mr. Roosevelt. Now, Mr. Littleton, I can answer you right away that I was then thoroughly satisfied, and the after events made me even more thoroughly satisfied, that what was done was necessary to save the situation; that the panic would have spread and very great disaster occurred if exactly what was done had not been done. A good many of the questions, Mr. Littleton and Mr. Stanley, that you are offering are requiring me to search the hidden domain of motive of Mr. Frick and Mr. Gary. I never supposed that they were going to take action that would be damaging to themselves, for I would have been exceedingly sure they would have gotten no gratitude for taking such action if they had taken it. My feeling toward them was—I can illustrate it by two similies. I have spoken of a sailboat already. If it is necessary to haul on a rope on a boat in order to prevent the boat from going over, I welcome the help of any husky individual that hauls and I do not care whether he is hauling from altruistic motives about me or to save his own skin. I want him to pull hard on the rope. That is all I want.
>
> Again, if a fire is coming down a row of buildings, I expect the man on the end of the row to join in and help put out the fire farther up the row, partly, I hope, because he feels kindly toward the threatened people, and also because if the fire spreads it will burn his own building. But I do not ask him to analyze the extremely mixed motives which made him come forward and help put out that fire. I want him to help put out the fire. That is all.
>
> Mr. Littleton. Taking the first similie, Col. Roosevelt, the only apprehension that the evidence would create in the minds of any persons hearing and reading regarding the pulling on the rope would be this: Whether or not the pulling was on a rope which was actually attached to the sail or whether it was one of the guy ropes attached to the mast. [Laughter.] And if you were to pull the wrong rope, the question is not what you would have done, not what you did, as to whether your motives were good, because I would not question those for a moment. My question is as to whether or not you were rightly advised on the situation and encouraged with them to pull a rope which was really attached to the sheet against which the storm was blowing.

> Mr. ROOSEVELT. Mr. Littleton, no man during the storm capable of making any such error as that of which you s Not until all danger was passed would any human bein knowledge have ventured to suggest that we were not pullin a rope that was attached to the sail. The supposition was posterous. We were pulling on a rope that we thought wa tached to the one sail that was in danger. No human being knew the facts doubted it, and the result showed it so cle that it is not possible to be in error about it. (Hearings, 1383-1384.)

How a panic which had persistently resisted the combined ef of the Federal Government and John D. Rockefeller and J. P. Mo & Co., and remained in unabated fury after Morgan and Rockef had turned loose $60,000,000 and the Federal Treasury $25,000 more should suddenly be stilled by this manipulation of Gran Schley's loans has not been explained either by Mr. Roosevelt o any other witness. Yet it is urgently maintained that the panic tinued prior to this magical scoop of securities and that the ins the Steel Corporation acquired the Tennessee Coal & Iron Co.'s it subsided instantly and permanently.

> Mr. LITTLETON. Let me ask you this question: When or did these bonds, which were the curative remedy for the diffic in Wall Street, reach the point that needed to be cured?
>
> Mr. GARY. The announcement from Washington, immedia after the conference with the President, that the trade woul consummated
>
> Mr. LITTLETON. "All is well?"
>
> Mr. GARY. That certainly, I have no doubt, produced a g feeling of relief immediately in New York. Of course the ba knew then that the purchase would be made and the bo would be delivered and that everyone would be relieved.
>
> Mr. LITTLETON. Then the men who were saying "Take Tennessee," "Take out Tennessee" heard the word from W ington that the Tennessee had been sold now, and that the se ity which was necessary to protect their loans would com to take the place of the Tennessee Coal & Iron stock?
>
> Mr. GARY. There is no doubt of it. (Hearings, p. 176.)

That Col. Roosevelt distinctly heard ominous rumblings in Street at the time he consented to this remarkable merger can no doubted. In the light of subsequent events, it is equally certain it was the receding and not an approaching storm which turbed him. In an editorial on June 7, 1911, published in the York World, it was clearly demonstrated that the panic was prior to the interview between Col. Roosevelt and the representat of the Steel Corporation:

> Let the record of the panic testify as to whether this actio the part of Mr. Roosevelt was actually necessary "if a fina cataclysm was to be averted:"

> October 19, 1907, it was announced that Charles W. Morse had resigned from all the banks and trust companies with which he was connected.
>
> October 20 the clearing house committee stated that the Heinze-Morse-Thomas interests had been eliminated from the banking situation. The committee issued the following statement:
>
> "A committee of the clearing house have examined the several banks of the association that have been under criticism and, finding them solvent, the clearing-house committee have decided to render them such assistance to meet their deposits as the committee may think necessary."
>
> October 21 the National Bank of Commerce, controlled by Thomas F. Ryan, suddenly notified the other clearing house banks that it would cease to act as clearing house agents for the Knickerbocker Trust Co.
>
> October 22 there was a run on the Knickerbocker Trust Co., which closed its doors and the panic was in full swing. That evening J. Pierpont Morgan said:
>
> "We are doing everything we can as fast as we can, but nothing has yet crystallized."
>
> October 23 something "crystallized," for the New York Times printed a statement inspired by George W. Perkins, one of Mr. Morgan's partners, saying "The chief sore point is the Trust Co. of America." A run immediately began on the Trust Co. of America. This same day George B. Cortelyou, Secretary of the Treasury, dumped $25 000 000 of Government money into Wall Street.
>
> October 24 the Morgan-Rockefeller interests advanced $60 000 000 to steady the stock market.
>
> October 25 stocks advanced, and Clark Williams, State superintendent of banks, said the situation was improving. The Trust Co. of America was steadily paying off its depositors, but under difficulties.
>
> October 26 Mr. Roosevelt issued a statement congratulating Mr. Cortelyou "on the admirable way you have handled the present crisis." Mr. Roosevelt also congratulated "those conservative substantial business men" who did "invaluable service in checking the panic."
>
> Apparently the panic was over. The newspapers ceased to publish the news of it on the first page. (Hearings, p. 247.)

Up until the time of this interview the Steel Corporation owed its success and its permanency to the power and the skill of the financiers who had created and the iron masters who had directed its operations. Since that time its dominance has been due in no small measure to the sudden, ill-considered, and arbitrary fiat of the Chief Executive.

The President's refusal to interfere was an absolute warrant to proceed. A suggestion from him to the Attorney General was equivalent to a command; and upon a refusal of the Attorney General to act, the corporation was immune. This is admitted by Col. Roosevelt, and he unhesitatingly assumes full responsibility in the matter.

In transmitting his letter of November 4, 1907, to the Senate, President states:

> As to the transaction in question, I was personally cogni of and responsible for its every detail. (Hearings, p. 1122.

Before this committee Col. Roosevelt stated:

> Mr. Littleton. I call your attention to what it is only n sary to call your attention to, because you undoubtedly ha in mind, that the Sherman antitrust law, whether wisel unwisely remains to be seen, provides in section 4 that the A ney General or the district attorneys could, if they chose to d invoke the courts of equity to enjoin certain powers.
>
> Mr. Roosevelt. Certainly.
>
> Mr. Littleton. And that remedy has been held to be an ex sive remedy; that is, they are the sole authorities who c invoke the courts of equity to enjoin such powers?
>
> Mr. Roosevelt. Yes.
>
> Mr. Littleton. I suppose you naturally understood Mr. (and Mr. Frick were coming to you because of a distressing si tion in New York, because if they undertook to do this t without apprising the Government fully what they intende do, and they were enjoined in the proceeding by the Atto General, it would make the difficulty all the worse.
>
> Mr. Roosevelt. My own belief was—of course again I am giving my impression of their acts, Mr. Littleton.
>
> Mr. Littleton. Yes.
>
> Mr. Roosevelt. But my belief was that they knew that if I did not direct an injunction against them, that if I me stated that it ought not to be done, they could not do it.
>
> Mr. Littleton. Yes. In other words, the adverse atti of the Government, whether in a distinct direction to Department of Justice, or the announcement of your position
>
> Mr. Roosevelt. Would have been conclusive against it.
>
> Mr. Littleton. Would have been conclusive against it.
>
> Mr. Roosevelt. As I said there, my responsibility was plete and absolute. I can not state it any stronger, Mr. Littl (Hearings, p. 1387.)

If the Steel Corporation could have absorbed the Tennessee & Iron Co. without a semblance of injury to the steel industr without the violation of existing law it would not have been neces for Judge Gary and Mr Frick, on a special car "rigged" up at night, to make that hurried run to Washington or to confer with President before breakfast. If the merger was in violation of law it is equally clear that the President had no right to condon encourage its violation, or to prevent the Attorney General from forming his duty, even though the prosperity of a dozen banke New York had depended upon it, much less the fate of a single s broker, whose reckless transactions had involved him in fina disaster.

As stated by Senators Culberson, Kittredge, Overman, Rayner, Bacon, Nelson, and Foraker, in a report touching this transaction, filed March 2, 1909:

> Assuming, therefore, for present purposes, that the absorption of the Tennessee Co. by the United States Steel Corporation was in violation of the act of Congress approved July 2, 1890, commonly known as the Sherman antitrust law, we are of the opinion that the President was not authorized to permit the absorption. The proposition is self-evident, needing neither argument nor judicial authority to support it, for manifestly the President is without authority to annul or suspend a law or to direct its nonenforcement either generally or in a particular case. The principle involved, in its broadest sense, is inherent in our form of government and is essential in the preservation of the rights and liberties of the people. This view is strengthened, if such were necessary, by the fact that the President is the one official who is by the Federal Constitution expressly enjoined to "take care that the laws be faithfully executed." Whatever may be the supposed emergency, no discretion is lodged in the President as to the enforcement of the law. This is a government of law and not of men, of law universal in its application, as to which none are immune. It is imperative that this principle be preserved in such a case as this, lest in time we revive the despotic prerogative of kings to create and license monopolies. (Hearings, p. 1135.)

FINANCIAL AND INDUSTRIAL RELATIONS OF THE OFFICERS AND DIRECTORS OF THE UNITED STATES STEEL CORPORATION WITH OTHER CONCERNS.

A corporation speaks and acts through its officers, and the character and scope of its influence are to a great extent determined by the personnel of its directorate.

Where two or more corporations are owned and operated by the same group of individuals, their interests will be identical, and in a great measure the strength of one is the combined strength of all. This is true to a degree where the directorates interlock. This record is replete with instances of the pernicious effect sometimes upon the Steel Corporation itself, and more often upon the public generally, of this interlocking of directorates.

The enormous sum paid for the properties of the Lake Superior Consolidated Iron Mines and the manifestly excessive sum for the Troy Steel Products Co., with rebates on purchases to the Standard Oil Co.; the purchase of supplies by the International Harvester Co. and the American Tin Can Co. at greatly reduced rates; the complicated web of agreements in restraint of competition, low costs in sliding-scale contracts, and the huge sums paid Mr. H. C. Frick and others in the absorption of the Union-Sharon Steel Co.; the inordinate sums paid to promoters and underwriters are concrete instances of abuses directly traceable to this community of interest between a few erful individuals in control of a number of great corporations.

The Steel Corporation is capitalized at $1,745,724,284.49 (M Rept., Ex. 20); but this sum, huge as it is, in no degree detern its actual power.

The influence of this consolidation is measured only by the bined strength and resources of the 24 directors, who contrc resources and direct its operations.

The Steel Corporation is strengthened and fortified by coml tion and cooperation with the multitude of industrial and fina institutions with which its directors are identified and over which exercise a greater or less degree of control. These connections, nitely extended and complicated, reach every department of ductive industry and accumulated wealth, permeating the doma mining, manufacturing, and transportation throughout the cou

One or more of the directors of the Steel Corporation are directors in terminal, steamship, express, and telegraph comp having a total capitalization of $1,271,778,890; in industrial cor tions with a combined capitalization of $2,803,509,348; and in b and trust companies having a capital, surplus, and undivided p aggregating $3,314,811,178.

Of $18,417,132,238 invested in railways of the United States directors of the Steel Corporation have a voice in the directorat or act as executive officers of railroad companies with a total cap zation and bonded indebtedness of $10,365,071,833. (See Exhib appendix to this report.)

Many of the evils incident to the close cooperation and often bination between great banking, manufacturing, and transport companies are due to the merger of such companies under the co of a "holding company." The holding company is not an evoluti is an abuse of corporate power, and its prime purpose almost wit exception has been the evasion or the violation of the law.

> It provides a method for combining under one manager and control corporations from one end of the country to the o

The holding of the stocks of transportation lines and other concerns doing an interstate business by such companies should be tolerated by the Federal Government where it has the auth to prevent it.

The United States Steel Corporation, utilizing to the utmost opportunity for consolidation and control afforded by a hol company, and supported and sustained by its allies, financial industrial, has secured an unquestioned and an absolute domin over the production, manufacture, and transportation of its proc

The extent of that control and its freedom from the restraint dent to legitimate and effective competition is reflected in the p obtained for its output since its organization. From January 1 to December 31, 1910, the net earnings of the Steel Corporation have aggregated the huge sum of $1,029,685,389.28, or an average of $13 per ton upon its sales to outside customers, or a net profit of 40 per cent on the actual cost of production. (MacRae's Rep., p. 3528.)

Mr. Carnegie, who has had every opportunity to know the situation existing in this industry and who now has but little motive to dissemble, has stated to this committee:

> Mr. BEALL. Do you draw any distinction between a corporation like a railroad corporation, a great public corporation, and one of these industrial corporations?
>
> Mr. CARNEGIE. Not if the industrial corporations combine and make an arbitrary price. I see no difference.
>
> Mr. BEALL. Is it not a fact that the reason you are now suggesting this appeal to the Government is that in the last 10 or 12 years we have witnessed such a growth in these great corporations that they have now grown so strong and so great that it is the Government, and the Government alone, that is strong enough to face them upon the battle field?
>
> Mr. CARNEGIE. That is my opinion.
>
> Mr. BEALL. That the only agency that can control them, that can combat with them, is the power of the Federal Government?
>
> Mr. CARNEGIE. That is my opinion, and it is not recently formed.
>
> Mr. BEALL. And that before corporations of this kind and combinations of this kind, both existing, as you think, the consumers of this country are absolutely helpless?
>
> Mr. CARNEGIE. Yes; they at the mercy——
>
> Mr. BEALL (interposing). They are at the mercy of these corporations?
>
> Mr. CARNEGIE. Certainly. You will find this as strongly stated as I can state it in this statement which I have prepared. (Hearings, p. 2430.)

REMEDIAL LEGISLATION RECOMMENDED.

The control of corporations by the Federal Government, as recommended by Mr. Carnegie, Judge Gary, and others, is not approved. Whatever may be the evil results of the elimination of competition from the steel business, it does not justify such a remedy and could not be cured by it. Such a control, semisocialistic in its nature, is beyond the power vested by the Constitution in the Federal Congress.

The abuses mentioned in this report can in a great measure be remedied by giving to the operations of the United States Steel Corporation and other like corporations the widest publicity, and by the strict enforcement of laws specifically inhibiting the employment of cunning devices by which an unfair advantage over competitors is secured. The Bureau of Corporations possesses the authority to thoroughly investigate the internal affairs of industrial concerns doing an interstate business. Had the character of the Steel Corporation and the nature and extent of its operations been known to people and to the President of the United States at the time of absorption of the Tennessee Coal & Iron Co., it is highly improb that the Chief Executive would in 20 minutes have given his con to a merger fraught with infinite injury to the steel industry an the public alike.

The Commissioner of Corporations should be required to repor Congress as well as to the President of the United States, at s times and upon such conditions as it may prescribe, and the creating this bureau should be so amended as to make such rep mandatory upon the Commissioner of Corporations.

The enormous earnings of the Steel Corporation are due not degree of integration or efficiency not possessed by its competit but to the ownership of ore reserves out of all proportion to its out or requirements and to the control and operation of common carri and to concessions, in the nature of rebates, obtained from other roads through inequitable divisions of rates and inordinate term allowances. The business of production and transportation sh be absolutely separate and distinct, and no industrial concern sh be permitted to own or operate an interstate carrier.

The Attorney General of the United States and his subordin should not be permitted to exercise an absolute discretion as to institution of proceedings under the act of July 1, 1890, known as Sherman Antitrust Act, or other acts prohibiting combinations i straint of trade. The parties injuriously affected by such comb tions should have access to the courts and the benefit of adequate sufficient remedies for wrongs inflicted by such combinations.

Bills embodying legislation designed to accomplish this purpose presented with this report.

Mr. Littleton does not concur in the proposed bill amending Sherman antitrust act, which bill is submitted herewith as Exhibi

A. O. Stanley.
Charles L. Bartlet
Jack Beall.
Martin W. Littleto
D. J. McGillicuddy.

EXHIBIT A.

A BILL To further protect trade and commerce against unlawful restraints and monopolies.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the act approved July second, eighteen hundred and ninety, entitled "An act to protect trade and commerce against unlawful restraints and monopolies" is hereby amended by adding thereto the following:

SEC. 9. In the following sections of this act, unless the context otherwise requires—

(a) The word "suit" means any civil suit or proceeding brought under or involving the provisions of this act.

(b) The word "combination" includes any contract, or combination in the form of trust or otherwise.

(c) The words "restraint of trade" mean any restraint in any respect or to any extent of trade or commerce among the several States or with foreign nations.

(d) The word "vendor" includes lessor, licensor, or bailor.

(e) The word "vendee" includes lessee, licensee, or bailee.

(f) The word "purchase" (noun) includes lease, license, or bailment.

(g) The word "purchase" (verb) includes leasr, license, or otherwise obtain.

(h) The word "purchasing" includes leasing, licensing, or obtaining.

(i) The word "sell" includes lease, license, bail, or furnish.

(j) The word "sold" includes leased, licensed, bailed, or otherwise dealt in or furnished or supplied.

(k) The word "sale" includes lease, license, or bailment.

(l) The word "price" includes rental, royalty, or other means of compensation.

(m) The word "person" shall be deemed to include "persons."

SEC. 10. Any person who shall be injured in his business or property, or shall be threatened with such injury, by any other person or corporation by reason of anything forbidden or declared to be unlawful by this act, may bring suit in equity in any district court of the United States in the district in which the defendant resides or is found, to prevent and restrain violations of this act and for other appropriate relief.

SEC. 11. Whenever suit has been instituted under section four of this act, any person who shall be injured in his business or property, or threatened with such injury, by the defendants in said suit or any of them by reason of anything forbidden or declared to be unlawful in this act, and any State of the United States, may at any time intervene in said suit to protect his interests, or, if the intervenor be a State, the interests of the citizens of such State, and any person interested or any State may after final decree in said suit petition said court for protection or redress in case of any violation of said decree, and the court shall have power to take such action as may be appropriate in the premises.

SEC. 12. Whenever in any suit it shall appear that any combination was entered into, existed, or exists, which was or is in restraint of trade, the burden of proof to establish the reasonableness of such restraint shall be upon the party who contends that such restraint is reasonable.

SEC. 13. Whenever it shall be established in any suit that any combination was entered into, existed, or exists, which was or is in restraint of trade, and that such combination was entered into, existed, or exists, for the purpose of restraint of trade, then such restraint of trade shall be conclusively deemed to have been and to be unreasonable and in violation of the provisions of this act, as to any party thereto, who in carrying on any business to which such combination relates or in connection therewith shall—

(a) Do business directly or indirectly under any name other than his own or that of the partnership, corporation, or association of which he is a member, or be guilty of any concealment or misrepresentation as to the ownership or control of such business or any misrepresentation as to the identity of the manufacturer, producer, or vendor of any article sold.

(b) As the vendor of any article, secure information concerning the business of any competitor, from any agent, or employee of such competitor, or from any State or Federal official by any illegal means whatsoever.

(c) As the vendor of any article, supply or offer to supply such article without c or at a price at or below cost of production and distribution.

(d) As the vendor of any article, fix upon some raw or manufactured material he controls and which is required for producing a competitive article an unreas high price or unreasonable condition of sale.

(e) As the vendor of any article, shall enter into any contract or arrangement which the vendor shall not sell any article in which he deals to certain pers classes of persons or to those doing business within certain districts or territorie

(f) As the vendor of any article, supply or offer to supply to any person doing ness in any particular territory articles sold by him upon terms or conditions i respect more favorable than are accorded to other customers.

(g) As the vendor of any article, refuse to supply to any other person requ the same any article sold, or consent to supply same only upon terms or cond in some respects less favorable than are accorded to any other person.

(h) As the vendor of any article, make in the price or other terms of any sal discrimination based upon whether the vendee purchases from him articles of ticular quantity or aggregate price.

(i) As the vendor of any article, attempt to prevent or restrain in any manner directly or indirectly any vendee from purchasing such article or any other a from some other person, or using such article or any other article obtained from other person, whether such attempt be made (first) by an agreement express or in against such purchase, or (second) be made by a condition in the sale against purchase, or (third) be made by imposing any restriction upon the use of the a so sold, or (fourth) be made by making in the price any discrimination based whether the vendee purchases any article made or sold by some other person, or be made in any manner except the ordinary soliciation of trade.

(j) As the vendor of any article, use any unfair or oppressive methods of compet

The foregoing enumerations of acts, conduct, methods, and devices shall not in or shall not be construed to include, or as intended to exclude, any other acts duct, methods, or devices which are or may be unreasonable.

The provisions of clause (i) shall not apply to the mere appointment of sole age sell any article.

SEC. 14. Whenever in any suit it shall appear that any combination was en into, existed, or exists, which was or is in restraint of trade, there shall at once a rebuttable presumption that such restraint was or is unreasonable if, in the bu in connection with which said restraint existed or exists, the person engaged in combination controlled or controls or is a member of any corporation or assoc which controlled or controls, at the time such restraint is alleged to have exist to exist, more than thirty per centum in value of the total quantity sold in the U States, or more than thirty per centum in value of the total quantity sold in the of the United States to which the business of such person, corporation, or associ extends, of any article dealt in by such person, the trade in which is affected by restraint.

SEC. 15. Whenever in any suit brought by or on behalf of the United States a judgment or decree shall have been rendered to the effect that a defendant in tion of the provisions of this act has entered into a combination in restraint of t or has monopolized or attempted to monopolize, or has combined with any pers monopolize, any part of the trade or commerce among the several States or foreign nations, the existence of such illegal combination or monopoly or of attempt to monopolize shall, to the full extent to which the issues of fact or law litigated, and to the full extent to which such fact, judgment, or decree would c tute in any other proceeding an estoppel as between the United States and defendant, constitute as against such defendant conclusive evidence of the facts and be conclusive as to the same issues of law in favor of any other person i other proceeding brought under or involving the provisions of this act.

SEC. 19. Whenever in any proceeding under section four of this act any com tion has been adjudged illegal under section one and section two of this act, the before which such proceedings are pending shall have jurisdiction:

(a) To partition any property owned under any contract or by any combination mentioned in section one and section two of this act in severalty among the owners thereof, or groups of owners thereof, and if the owners include one or more corporations, among the several stockholders thereof, or among groups of the several stockholders thereof, all in proportion to their respective interests.

(b) If sales of such property are necessary or proper, either to pay debts or incumbrances thereon, or to re-create conditions in harmony with the law, to sell such property as a whole or in parcels; and the court may forbid the said owners, and if the said owners include one or more corporations, the stockholders thereof, from purchasing at such sales, and may prescribe the conditions on which any purchase may be made by any person whatsoever.

(c) To make such restraining orders or prohibitions as may be necessary and proper to re-create conditions in harmony with the law, including prohibitions of any acts, conduct, methods, or devices which are enumerated herein as indicating unreasonable restraint.

(d) To declare void, as against the defendants or any of them, any contract entered into as a part of the combination found to be in restraint of trade.

The relief granted in this section shall be in addition to and not inclusive of other relief permitted by this act, or otherwise by law.

EXHIBIT B.

In the House of Representatives.

A BILL To prohibit persons engaged in the manufacture and sale of railroad cars, locomotives, railroad rails, and structural steel, or in the mining and sale of coal from becoming directors or other officers or employees of railroads engaged in interstate commerce.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after June thirtieth, nineteen hundred and thirteen, no person who is engaged as an individual or as a member of a partnership, or as a director or other officer, or an employee of a corporation, in the business, in whole or in part, of manufacturing or selling railroad cars or locomotives, or railroad rails, or structural steel, or mining and selling coal shall act as a director or other officer or employee of any railroad company which conducts an interstate-commerce business.

Sec. 2. That any person who shall be guilty of a violation of this law shall be punished by a fine of one hundred dollars a day for every day during which he shall act as a director, officer, or employee of the railroad company, or by imprisonment for such period as the court may designate, not exceeding one year, or by both such fine and imprisonment, in the discretion of the court.

EXHIBIT C.

A BILL To regulate the ownership of common carriers engaged in interstate and foreign commerce and the shipment of articles in interstate and foreign commerce over the lines of transportation operated by such carriers, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

Section 1. That from and after the thirty-first day of December, nineteen hundred and thirteen, no company, firm, or corporation, or officer thereof, doing a mining or manufacturing business, engaged directly or indirectly in interstate or foreign commerce, shall own in whole or in part, directly or indirectly, by stock ownership or otherwise, any railroad or other line of transportation, or the property of either, of any common carrier, subject to the provisions of the act to regulate commerce, approved February fourth, eighteen hundred and eighty-seven, as amended, to own, in whole or in part, directly or indirectly, by stock ownership of otherwise any railroad or other line of transportation, or the property of either, of any common carrier subject to the provisions of said act.

Sec. 2. That from and after the —— day of ——— it shall be unlawful for any person, company, firm, or corporation, who, or which, owns, holds, or in any way controls a majority of the capital stock of any other corporation, engaged in operat-

TABLE 2.—*Statement showing capital stock and indebtedness of the railroad companies of which the president, chairman of the executive board, and directors of the United States Steel Corporation are also officers or directors.*

Company.	Capitalization and bonded indebtedness.	Capitalization and bonded indebtendess of subsidiary companies controlled through stock ownership or long-term leases.
Atchison, Topeka & Kansas R. R. Co.	$569,437,100	$136,415,195
Atlanta & West Point R. R. Co.	2,496,800	400,000
Atlantic Coast Line Co., The:		
Atlantic Coast Line R. R. Co.	203,048,870	286,666,638
Baltimore & Ohio R. R. Co.	533,544,933	112,936,460
Bessemer & Lake Erie R. R. Co.	4,530,000	27,669,000
Chicago, Burlington & Quincy R. R. Co.	320,695,100	132,957,621
Chicago & North Western R. R. Co.	361,740,143	66,409,223
Cincinnati, New Orleans & Texas Pacific R. R. Co.	7,006,400	19,159,000
Chicago Great Western R. R. Co.	105,268,115	57,066,552
Chicago, Indianapolis & Louisville Ry. Co.	33,712,000	2,018,000
Delaware, Lackawanna & Western R. R. Co.	30,667,720	93,801,304
Duluth & Iron Range R. R. Co.	16,151,000	
Duluth, Mesabi & Northern R. R. Co.	17,213,500	
Elgin, Joliet & Eastern R. R. Co.	20,000,000	18,400,000
Erie R. R. Co.	402,269,047	92,845,590
Lehigh Valley R. R. Co.	127,017,074	97,020,148
New York Central & Hudson River R. R. Co.	491,321,727	948,780,334
New York, New Haven & Hartford R. R. Co.	376,069,925	388,715,999
Northern Pacific R. R. Co.	546,566,000	7,717,000
Pere Marquette R. R. Co.	93,072,767	
Pennsylvania R. R. Co.	705,979,773	711,258,295
Reading Co., The: All subsidiaries, including Central R. R. of New Jersey and Philadelphia & Reading R. R. Co.		260,372,424
Rock Island Co., The: Chicago, Rock Island & Pacific Ry. Co.	286,284,200	75,071,756
Richmond-Washington Co., The:		
Richmond, Fredericksburg & Potomac R. R.		6,991,600
Washington Southern Ry. Co.		7,961,000
Southern Railway Co.	399,383,500	147,702,757
Seaboard Air Line Ry. Co.	190,808,000	1,010,000
Union Pacific R. R. Co.	512,045,650	304,853,583
Western Railway of Alabama	4,543,000	
Total	6,360,872,344	4,004,199,479

Total capitalization and bonded indebtedness of railroad corporations in which the president and other directors of the United States Steel Corporation are officers or directors, $10,365,071,833.

Total capitalization and bonded indebtedness of all railroads in United States as given in Interstate Commerce Commission's Report, $18,417,132,238.

The foregoing table was compiled from Moody's Manual of Corporations, Poor's Manual of Railroads, and the 1910 report of the Interstate Commerce Commission, giving statistics of railroads in the United States for the year ending June 30, 1910. No complete statistics for the year ending June 30, 1911, were available. In some cases the entire capital stock of subsidiary companies are owned by the parent corporation; in rare instances both capital stock and bonds are so owned, but no allowances are made for this fact in the totals; none was made by the Interstate Commerce Commission's compilers. Where a holding company only controls other railroad companies and has no mileage of its own, its capital stock is not given. For instance, the Atlantic Coast Line Co. owns the Atlantic Coast Line Railroad Co., which in turn owns a majority of the stock of the Louisville & Nashville Railroad. Therefore the capital stock of the Atlantic Coast Line Railroad Co. is given, and the Louisville & Nashville Railroad Co.'s stock is included in that of its subsidiary.

TABLE 3.—*Statement showing capital, surplus, and deposits of the national, State, an savings banks, trust companies, and life and fire insurance companies, of which th officers and directors of the United States Steel Corporation are also officers or directors*

Companies.	Capital, surplus, undivided profits, and deposits.
Astor Trust Co	$16,726,380
Atlantic Mutual Insurance Co	14,888,902
Aetna Insurance Co., Hartford	12,369,016
Bankers' Trust Co	172,860,900
Bank of North America, Philadelphia	16,021,360
Bank of Commerce, Cleveland, Ohio	18,279,000
Chase National Bank	117,758,260
Continental Fire Insurance Co	16,246,478
City Deposit Bank, Pittsburgh, Pa	4,461,110
Continental & Commercial National Bank, Chicago	206,739,010
Chatham & Phoenix National Bank, New York	61,900,280
Commercial Trust Co., Philadelphia	13,610,560
Citizens' Savings & Trust Co	50,759,310
Cleveland Trust Co	31,290,400
Casualty Company of America	1,000,182
Commonwealth Trust Co., Boston	15,563,520
Farmers' Loan & Trust Co	123,401,590
First National Bank of Chicago	138,224,170
First National Bank of New York	148,741,430
First Security Company of New York	3,500,000
Fidelity-Phoenix Fire Insurance Co	5,885,745
Fourth Street National Bank, Philadelphia	56,649,970
Fidelity Trust Co., Philadelphia	39,214,200
Farmers' Deposit National Bank, Pittsburgh, Pa	34,161,090
Farmers' Deposit Savings Bank, Pittsburgh, Pa	4,786,970
Fidelity Title & Trust Co., Pittsburgh	19,239,300
Guaranty Trust Co., New York	171,2[illegible]0,100
Gary-Wheaton Bank, Wheaton, Ill	735,050
German Alliance Insurance Co	1,190,740
German-American Insurance Co	9,404,150
Industrial Trust Co., Providence, R. I	49,001,750
Liberty National Bank, New York	30,449,020
Land Title Trust Co	$13,424,00
Manhattan Trust Co., New York	22,173,20
Mutual Life Insurance Co	544,185,20
Mellon National Bank, Pittsburgh, Pa	44,230,97
Home Insurance Co	15,329,61
Merchants' Loan & Trust Co., Chicago, Ill	72,415,48
Metropolitan Trust Co. of New York	38,771,00
Massachusetts Bonding & Insurance Co	737,86
National Bank of Commerce, New York	216,492,95
Newport Trust Co	1,865,51
National Union Fire Insurance Co	1,308,10
New York Trust Co	61,900,28
National City Bank, New York	261,798,39
National Shawmut Bank, Boston, Mass	109,191,87
Old Colony Trust Co., Boston	94,376,31
Philadelphia National Bank	57,902,86
Reliance Life Insurance Co	2,957,67
Standard Trust Co. of New York	24,840,39
Second National Bank of Richmond, Ind	2,292,48
Safe Deposit & Trust Co. of Baltimore	14,572,02
Union Trust Co., Pittsburgh	66,230,22
Union Insurance Co., Pittsburgh	194,74
Union National Bank, Richmond, Ind	1,189,45
Union Trust Co., Springfield, Mass	7,481,60
Western Saving Fund Society, Philadelphia	30,068,36
Wilmington Savings & Trust Co., Wilmington, N. C	1,959,49
Total	3,314,811,17

TABLE 4.—*Statement showing capital and funded indebtedness of street railways, terminal, steamship, express, and telegraph companies of which the president, chairman of the executive board, and directors of the United States Steel Corporation are also officers or directors.*

Companies.	Capitalization and bonded indebtedness.
Adams Express Co	$48,000,000
American Telephone & Telegraph Co	569,437,100
Boston Elevated Ry. Co	33,250,000
Hudson & Manhattan R. R. Co	114,616,041
International Mercantile Marine Co	173,124,706
Mexican Telegraph Co	3,589,400
Mesabi Steamship Co	1,391,000
Marquette & Bessemer Dock & Navigation Co	500,000
Milledgeville Ry. Co	60,000
New England Navigation Co	24,249,000
Old Dominion Steamship Co	$2,500,000
Pennsylvania Tunnel & Terminal Co	25,020,000
Philadelphia Rapid Transit Co	34,974,675
Philadelphia Traction Co	20,338,000
Philadelphia Co	67,854,000
Terminal R. R. of Buffalo	1,000,000
West Pennsylvania railroads	11,516,000
Western Union Telegraph Co	140,358,968
Total	1,271,778,890

TABLE 5.—*Statement showing capital and funded indebtedness of the industrial corporations of which the officers and directors of the United States Steel Corporation are also officers or directors.*

Companies.	Capitalization and bonded indebtedness.	Companies.	Capitalization and bonded indebtedness.
American Bank Note Co	$8,992,394	Massachusetts Gas Co	$30,881,000
American Can Co	82.466,600	New Jersey General Security Co	2,000,000
Allis-Chalmers Co	47,018,000	New York Edison Co	38,742,622
American Steel Foundries Co	23,590,300	New York Mutual Gas Light Co	3,436,600
American Agricultural Chemical Co	43,577,700	National Supply Co., Toledo, Ohio	4,000,000
Blaugas Co	5,000,000	National Biscuit Co	54,040,500
Broadway Realty Co	4,000,000	New England Cotton Yarn Co	10,794,000
Boston Consolidated Gas Co	15.124,600	Ohio Iron & Steel Co	5,000,000
Consolidated Gas Co. of New York	108,618,600	Pennsylvania Coke & Coal Co	21,061,500
Cleveland-Cliffs Iron Co	5,000,000	Pennsylvania Water & Power Co	16,075,000
Cumberland Corporation	58,500,000	Rock Island-Rockport Lime Co	3,688,500
Electric Storage Battery Co	18,000,000	Spring Brook Water Co	10,989,000
East Jersey Water Co	800,000	Sheffield Coal & Iron Co	4,000,000
General Electric Co	80,143,200	Seattle Electric Co	25,265,000
Gulf Oil Corporation	18,337,000	Securities Co	4,765,015
Harris Bros. & Co. (Inc.)	3,800,000	Southern Cotton Oil Co	10,000,000
Hartford Carpet Corporation	5,000,000	Texas & Pacific Coal Co	3,500,000
International Harvester Co	140,000,000	Toledo Furnace Co	2,000,000
International Nickel Co	29,143,400	Torrington Co., The	4,150,000
International Smelting & Refining Co	10,000,000	United States Steel Corporation	1,464,935,467
Keystone Watch Case Co	6,000,000	United States Natural Gas Co	5,038,500
Lehigh & Wilkesbarre Coal Co	28,899,500	United States Improvement Co	55,502,950
Lackawanna Steel Co	77,073,000	Virginia-Carolina Chemical Co	57,384,400
Montclair Water Co	1,000,000	Washburn Wire Co	3,750,000
Manning, Maxwell & Moore (Inc.)	5,000,000	Pullman Co	120,000,000
Mohican Oil & Gas Co	2,000,000	Cuba Co	11,425,000
Madison Square Garden Co	4,000,000	Total	2,803,509,348

NOTES ON TABLE 1.

American Telephone & Telegraph Co.—This company owns a majority of the $32,000,000 outstanding capital stock of the Western Union Telegraph Co.

Atlantic Coast Line Co., The.—The Atlantic Coast Line Co. owns $50,000 of the $100,000 capital stock of the Northwestern Carolina Ry. of South Caroilna. The Atlantic Coast Line R. R. Co. owns jointly with the Louisville & Nashville R. R. Co. $1,500,000 of the $3,000,000 capital stock of the Western Ry. of Alabama.

Atlantic Coast Line Railroad Co.—A majority of the $200,000 capital stock of the Belt Line Ry. of Montgomery, Ala., and of the $12,000 capital stock of the Charleston & Western Carolina R. R. Co. is owned by this company. This company owns $30,600,000 of the $60,000,000 capital stock of the Louisville & Nashville R. R. Co.

Boston Consolidated Gas Co.—The Massachusetts Gas Cos. own $15,110,600 of the $15,124 600 capital stock of this company.

Chicago Burlington & Quincy R. R. Co.—The Northern Pacific R. R. Co. and the Great Northern R. R. Co. own jointly $107,613,500 of the $110,839,100 outstanding capital stock of this road. The Chicago, Burlington & Quincy R. R. Co. owns $26,667,500 of the common, $1,130,000 of the first preferred, and $6,078,700 of the second preferred, a total of $33,786,200 of the $48.000,000 outstanding capital stock of the Colorado & Southern R. R. Co.

Colorado & Southern R. R. Co.—The Chicago, Burlington & Quincy R. R. Co. owns $33,786,200 of the $48,000,000 outstanding capital stock of this railroad.

Consolidated Gas Co., The.—This company owns $1,886 200 of the $3 500.000 capital stock of the New York Mutual Gas Light Co.

Erie & Jersey R. R. Co.—This road is leased to the Erie Terminal Railroad Co., which company grants trackage rights to the Erie R. R. Co.

Erie R. R. Co.—This company owns the entire $100,000 capital stock of the Chicago & Erie R. R. Co.; it owns $25,594,844 of the $26,000,000 capital stock of the New York, Susquehanna & Western R. R. Co. It owns a majority of the $2,228,600 outstanding capital stock of the New York & New Jersey R. R. Co.

Keystone Watch Case Co.—This company owns and operates the E. Howard Watch Works, of which Robert Winsor is a director.

Lake Shore & Michigan Southern R. R. Co.—This road owns $5,930,000 of the preferred, $5,940,000 of the common stock, a total of $11,870,000 capital stock of the $23,680,000 outstanding capital stock of the Lake Erie & Western R. R.; it owns $2,503,000 first preferred, $6,275,000 second preferred, and $6,240,000 common, a total of $15,018,000 of the $30,000,000 outstanding capital stock of the New York, Chicago & St. Louis R. R. Co. This road owns $7,500,150 of the $21,000,000 outstanding capital stock of the Pittsburg & Lake Erie R. R.

Louisville & Nashville R. R. Co.—The Atlantic Coast Line R. R. Co. owns $30,600,000 of the $60,000,000 outstanding capital stock of this company. This company owns $7,177,600 of the $10,000,000 outstanding capital stock of the Nashville, Chattanooga & St. Louis Ry. Co.

Louisville & Nashville R. R. Co.—This company and the Atlantic Coast Line R. R. Co. own jointly $1,500,000 of the $3,000,000 capital stock of the Western Ry. of Alabama.

Marquette & Bessemer Dock & Navigation Co.—The $50,000 capital stock of this company is owned in equal proportions by the Bessemer & Lake Erie R. R. Co. and the Pere Marquette R. R. Co.

Pere Marquette R. R. Co.—This company owns half of the $50,000 capital stock of the Marquette & Bessemer Dock & Navigation Co.

Massachusetts Gas Cos.—The Massachusetts Gas Cos. own $15,110,600 of the $15,124,600 capital stock of the Boston Consolidated Gas Co.

Mobile & Ohio R. R. Co.—The Southern Ry. Co. owns $5,670,200 of the $6,070,600 capital stock of this company.

Nashville, Chattanooga & St. Louis Ry. Co.—The Louisville & Nashville R. R. Co., owns $7,177,6 the $1,000,000 outstanding capital stock of this company.

New England Navigation Co., The.—All of the $53,000,000 outstanding capital stock of this compan owned by the New York, New Haven & Hartford R. R. Co.

New Jersey Junction R. R. Co.—All of the $100,000 outstanding capital stock of the New Jersey Junc Railroad Co. is owned by the New York, New Haven & Hartford R. R. Co.

New York Central & Hudson River R. R. Co.—This company owns 91½ per cent of the $45,750,000 standing capital stock of the Lake Shore & Michigan Southern R. R. Co.; it owns the entire capital s of the Carthage & Adirondack Ry. Co., the entire capital stock of the Mohawk & Malone Ry. Co. entire capital stock of the New Jersey Junction R. R. Co., the capital stock of the New York & Put R. R. Co., which in turn owns the New York & Northern Ry. Co.; it owns the entire capital stoc the St. Lawrence & Adirondack Ry. Co., the entire capital stock of the West Shore R. R. Co., and entire capital stock of the New York & Ottawa Ry. Co. The $1,000,000 capital stock of the Terminal road of Buffalo is owned in equal proportions by the New York Central & Hudson River R. R. Co., the Lake Shore & Michigan Southern R. R. Co.

New York Mutual Gas Light Co.—The Consolidated Gas Co. of New York owns $1,886,200 of $3,500,000 capital stock of this company.

New York, New Haven & Hartford R. R. Co.—This company owns $1,640,000 of the $2,967,000 outsta ing capital stock of the Hartford & Connecticut Western Railroad, which road is leased to the Central England Co., a subsidiary of the New York, New Haven & Hartford R. R. Co. This company o $3,212 of the $4,000 preferred and $13,105,185 of the $58,113,982 common stock of the New York, Ontari Western Railway Co. This company controls the Millbrook Co., which in turn owns the York, Westchester & Boston Railway Co.

New York, Ontario & Western Ry. Co.—The New York, New Haven & Hartford R. R. Co. owns $3 of the $4,000 preferred and $13,105,185 of the $58,113,982 common stock of this company.

New York, Philadelphia & Norfolk R. R. Co.—Practically all of the $2,500,000 capital stock of this c pany is owned by the Pennsylvania R. R. Co.

New York & Putnam R. R. Co.—All of the $6,500,000 capital stock of this company is owned by New York Central & Hudson River R. R. Co. The New York & Putnam R. R. Co. also owns the York & Northern Railway Co.

New York, Susquehanna & Western R. R. Co.—The Erie R. R. Co. owns $25,594,844 of the $26,000 outstanding capital stock of this road. This company owns $10,577,200 of the $19,342,500 capital stoc the Northern Central Ry. Co.

New York, Westchester & Boston Railway Co.—All of the $5,000,000 outstanding capital stock of this c pany is owned by the Millbrook Co., which is controlled by the New York, New Haven & Hartford R. Co.

Northern Pacific R. R. Co.—This company owns $53,806,750 of the $110,839,100 outstanding capital st of the Chicago, Burlington & Quincy R. R. Co.

Northern Central Ry. Co.—The Pennsylvania R. R. Co. owns $10,577,200 of the $19,342,500 capital st of this company.

Northwestern Ry. of South Carolina.—The Atlantic Coast Line Co. owns $50,000 of the $100,000 cap stock of this company.

Pennsylvania R. R. Co.—This company owns practically all of the $2,500,000 capital stock of the York, Philadelphia & Norfolk R. R. Co.; it owns $15,000,000 of the $25,000,000 outstanding capital stoc the Pennsylvania Tunnel & Terminal R. R. Co.

The Reading Co. owns the entire capital stocks of the Philadelphia & Reading R. R. Co. and the Ph delphia & Reading Coal & Iron Co., and $14,504,000 of the outstanding $27,436,800 capital stock of the Cen R. R. of New Jersey. It also owns the $20,000,000 purchase money bonds of the Philadelphia & Read Railroad.

Pennsylvania Tunnel & Terminal R. R. Co.—The Pennsylvania R. R. Co. owns $15,000,000 of $25,000,000 outstanding capital stock of this company.

Philadelphia Co., The—The United Rys. Investment Co. owns $24,200,000 of the $38,626,000 outstand capital stock of this company. The Philadelphia Co. owns all of the $5,000,000 outstanding capital st of the Pittsburgh Rys. Co.

Philadelphia Rapid Transit Co.—This company leases the Union Traction Co., of Philadelphia, whic turn leases the Philadelphia Traction Co.

Pittsburgh & Lake Erie R. R. Co.—The Lake Shore & Michigan Southern R. R. Co. owns $7,500,15 the $21,000,000 outstanding capital stock of this company.

Philadelphia Traction Co., The.—This company is leased by the Union Traction Co. of Philadelp which in turn is leased by the Philadelphia Rapid Transit Co.

Pittsburgh, Bessemer & Lake Erie R. R. Co.—The Carnegie Co., a subsidiary of the United States S Corporation, owns $5,500,000 common and $5,100,000 preferred of the $10,000,000 common and $2,000 preferred capital stock of this company.

Pittsburgh Rys. Co., The.—All of the $5,000,000 outstanding capital stock of this company is owned by Philadelphia Co.

Southern Railway Co.—This company owns $5,670,200 of the $6,070,600 capital stock of the Mobil Ohio R. R. Co.

Terminal Railroad of Buffalo, The.—The $1,000,000 capital stock of this company is owned in equal portions by the New York Central & Hudson River R. R. Co. and the Lake Shore & Michigan South R. R. Co.

Union Traction Co.—This company leases the Philadelphia Traction Co. and is leased by the Philadelp Rapid Transit Co.

United Rys. Investment Co.—This company owns $24,200,000 of the $38,626,000 outstanding capital st of the Philadelphia Co.

Western Ry. of Alabama.—The $3,000,000 capital stock of this company is owned jointly by the Lo ville & Nashville R. R. Co. and the Atlantic Coast Line R. R. Co.

West Shore R. R. Co.—The entire $10,000,000 capital stock of this company is owned by the New Y Central & Hudson River R. R. Co.

Western Union Telegraph Co.—The American Telephone & Telegraph Co. owns a majority of $32,000,000 outstanding capital stock of this company.

EXHIBIT F.

PLATE AGREEMENT.

AGREEMENT A.

This agreement, made and entered into this 9th day of November, 1900, by and between Carnegie Steel Co., Jones & Laughlins (Ltd.), Illinois Steel Co., Crucible Steel Co. of America, Otis Steel Co., Tidewater Steel Co., Lukens Iron & Steel Co., Worth Bros. Co., Central Iron & Steel Co., the American Wire & Steel Co., the Glasgow Iron Co.—

Witnesseth that the above said parties have mutually agreed to and with each other to form an association for mutual interests, and to enable them to pay liberal wages to their workmen, to be known as the Steel Plate Association of the United States:

First. Each of the parties above named being manufacturers and sellers of steel plates, shall, by reason of such manufacture and sale, be entitled to membership in this association, and each of the parties hereto shall be entitled to portion of all shipments in the following proportions:

Carnegie Steel Co	46. 25
Jones & Laughlins (Ltd.)	4. 75
Illinois Steel Co	11. 00
Crucible Steel Co. of America	4. 50
Otis Steel Co	2. 50
Tidewater Steel Co	3. 00
Lukens Iron & Steel Co	7. 50
Worth Bros. Co	7. 00
Central Iron & Steel Co	8. 00
American Steel & Wire Co	5. 50

Glasgow Iron Co. to the extent of sales and output up to 40,000 tons, should they be ıble to accomplish them, prior to December 31, 1901.

Second. The officers of this association shall be as follows: A president, a treasurer, ı commissioner, and an executive committee consisting of six members, including the president. The conclusions of the executive committee meetings shall be at once communicated to all the members of this association.

Third. Each member of this association shall, on or before the 10th day of December, .900, and on or before the tenth day of each and every month thereafter during the erm of this agreement, or any extension thereof, render to the commissioner of this ssociation a statement, which statement shall be sworn to, or affirmed to, by one of he principal executive officers of the member so making the report, or in case the nember so making the report is a copartnership, then, in that case, the report shall e sworn to, or affirmed to, by one of the firm holding membership in this association, hich oath or affirmation shall be to the effect that the report so made is a true and orrect report of all the material described in the first clause of this agreement, which as shipped by the member making the report during the month for which the report s made; the form of the report and oath of affirmation as to its correctness shall be ırnished by the commissioner and shall include a statement of the rolling production r each month; and upon the commissioner's receiving from the respective members eir reports, as aforesaid, he, the commissioner, shall render to each member monthly, s soon as possible after the receipt of all the statements of all the members, copies of atements last rendered by each member, and shall forthwith "state an account," harging each member who has shipped during the month more than its or their ercentage of the total amount shipped by all the members of the association, the m of thirty-five hundredths of a cent per pound on each and every pound of such cess, and crediting each member who has not shipped its or their percentage of the total amount shipped by all the members of the association, with the sum of thirty hundredths of a cent per pound on each and every pound which it or they fail to during the month for which the reports are made, as aforesaid, and as a basis of culation making such "statement of account," the commissioner shall use the t of percentages as set forth in the first clause of this agreement; and upon the staten of such account by the commissioner, he shall immediately mail a copy therec each member of this association, and within five days after the receipt of any acc by the member of this association, which account shall show that the member recei the same is indebted to the association, the member so receiving its or their acco showing its or their indebtedness, shall forward to the treasurer a check or sight c drawn to the order of T. Mellon & Sons, in payment of such indebtedness, which cl or sight draft the treasurer shall deposit in the said T. Mellon & Sons' bank, Pittsbu Pa., to the credit of this association and remain to the credit of the member pa on excess of shipments and being increased or diminished as each month's busi shows. It shall be the right and privilege of each member, who shall not have ship his full percentage, to call, through the commissioner, on the members who have m an excess, to transfer to the short member a sufficient amount of tonnage, or other enable him to fill up his order book. It being the intent of this agreement that e member shall ship his entire percentage, and at the end of each year it shall be duty of the commissioner to so arrange between the members as to have the balanced; but any member unable, at the end of each year, to produce his allotm after first deducting his exempted tonnage, shall forfeit such unproduced tonn which shall be divided among the other members of the pool in proportion to t respective tonnage allotments.

Fourth. To insure the rendering of the statements and the faithful adhere of each party to the terms of this agreement, a guarantee fund of $100,000 s be formed by the payment on or before December 3, 1900, of $1,000 for each cent of allotment, as provided for in the first clause of this agreement, to the treasu which fund shall be deposited or invested as directed by the executive commit in trust for the members in the same proportion as received, subject, howeve such forfeiture or penalty as may be declared by a vote of a remainder of the m bers against any member violating the terms of this agreement, and as hereina provided.

Fifth. Whereas it has been agreed by and between all the members of this a ciation to exempt certain tonnage to cover orders already taken, it is agreed such exemption shall be as follows:

	To
Carnegie Steel Co	140,
Jones & Laughlins (Ltd.)	9,
Illinois Steel Co	15,
Crucible Steel Co. of America	2,
Otis Steel Co	1,
Tidewater Steel Co	2,
Lukens Iron & Steel Co	5,
Worth Bros. Co	3,
Central Iron & Steel Co	15,
The American Steel & Wire Co	7,
Glasgow Iron Co	

It is understood that those who hold exemptions under this agreement are to portion the shipments applying to them in monthly allotments, between the dat this arrangement and January 1, 1902, and such shipments shall not be subject to pool assessment.

Sixth. It is required that all plates shipped into the States bordering on the Pa coast, and to be actually used in the territory into which they are shipped, and all plates actually exported for use outside the limits of the United States, to be reported to the commissioner, together with bills of lading, or other evidence of exportation, for actual use abroad, satisfactory to him (said evidence to be confidential and not to be circulated among the members). Such tonnage will be deducted from the member's report, and the agreed pool tax charged on the balance.

Seventh. Upon receiving the written request of two members of the association, stating the object, the commissioner shall, upon the approval of the executive committee, call a meeting of the parties to this agreement, to be held within five days from date of his receiving such written request.

Eighth. If at any time any of the parties hereto shall have reason to suppose that any other party or parties to the agreement have violated any of the provisions of this agreement, the said party so supposing the agreement has been violated, shall file with the commissioner of the association, a bill of complaint against the party or parties so suspected of such violation, which bill of complaint shall fully set forth the act or acts complained of, together with all the matters or things connected therewith; the said bill of complaint shall be in writing, and shall furnish all the evidence that can be submitted in connection with the alleged violation, and upon receipt by the commissioner of any and all bills of complaint, as aforesaid, he shall forthwith use his best offices to have the accuser and accused arrive at an amicable settlement, failing in which he shall then submit all the information he may have to the executive committee for action; if the said executive committee shall determine that the charges have been sustained, they, the executive committee, shall impose a penalty of not less than $1,000, nor more than the amount standing to the credit of the member so punished, in the guaranty fund at the time the fine is imposed upon the party so adjudged as having violated the agreement, but if the executive committee shall determine that the charges have not been sustained, they shall dismiss the complaint from further consideration by them. It is further understood and agreed that no member of the executive committee shall act upon any bill of complaint made by, or made against the member of the association which he represents, nor shall any representative of a member of the association vote upon any bill of complaint brought by or brought against the member of the association he represents. Any penalty imposed by the executive committee will be collected by the treasurer, deducting the amount thereof from the deposit made by the member against whom the penalty is imposed, to the guaranty fund, as provided for in clause fourth of this agreement, within two weeks after such penalty is thus imposed, the sum thereof shall be transferred pro rata as per allotments to the accounts of the members of the association, excluding the member against whom the penalty is imposed, by the treasurer of the association, in which case the member so punished shall immediately remit an amount sufficient to make good the sum taken from the guaranty fund.

In case the offending member shall appeal to the association, and the action of the executive committee shall not be sustained by a majority vote of members of the said association, then the fine imposed shall be remitted, and any sum that the member may have paid into the association by reason of this shall be returned.

Ninth. No consideration, in the nature of brokerage or commission, shall be paid to anyone on sales of plates on and after January 1, 1901.

All sales between parties to this agreement shall be at pool prices, as provided in agreement "B," and all shipments shall be reported by the manufacturer on which pool tax will be charged the same as to outside parties, the purchaser also to report shipments of all such materials so bought, for which they shall claim and receive credit.

Tenth. At any meeting of the members of this association, called by the commissioner, as herein provided, any party or parties may give three months' notice of withdrawal herefrom, but no such notice shall take effect prior to January 1, 1902.

Statements shall continue to be rendered of all plates shipped up to date of such w drawal, the pool assessment to be charged thereon.

Eleventh. In case other firms or corporations are admitted as partners to this ag ment, the percentage of the pool allotted to each shall be deducted pro rata from percentages of the members immediately prior to the time of its admission; and in any of the parties hereto, or any of the parties hereafter admitted, shall withdraw, percentage of the pool allotted to such withdrawing party or parties shall be ad pro rata to the percentages of the parties remaining. In such case, the commissio shall compute and report the new percentages to the nearest one-hundredth of 1 cent, which degree of accuracy shall be deemed sufficient.

Twelfth. The agreement herein made of percentages, the amount of the guara fund as herein provided, and the agreement to maintain minimum fixed rates as c ered in agreement "B," shall not be altered, amended, or changed in any resp except by the unanimous consent of all parties to this agreement.

Thirteenth. To provide for the prompt payment of all salaries, rents, and ot expenses, a general expense fund shall be called in as needed by the treasurer, proportion to the percentage allotted each member of the association.

Fourteenth. No matter of account, or understanding outside of this agreeme shall affect the settlements herein provided for, either as an offset or otherwise, shall any written or unwritten agreement of the parties hereto, or any of them establish and maintain uniformity of prices, or any controversy arising out of any s agreement, or any failure to carry out any of its provisions, or to maintain prices, aff in any way the rendering of the statements and the making of the settlements her required.

Fifteenth. Whenever this agreement shall have been terminated, the balance the deposit, with accumulated interest remaining in the hands of the treasurer the credit of each party, after provision shall have been made for the payment all expenses, shall be returned to it, provided it shall have rendered all the sta ments required from it under this agreement, and have paid all its debtor balan In case any party hereto shall not have fulfilled its money obligations under t agreement, the amount it has on deposit in the guaranty fund shall be applied tow the fulfillment of those obligations, and the excess, if any, returned to it. But case any party shall not have fulfilled its agreement to render the monthly statem under this agreement, the amount it has on deposit in the guaranty fund, or excess thereof, as above stated, shall be divided among the parties who shall have filled their obligations under this agreement, in the proportion of their respect percentages.

Sixteenth. For all purposes of this contract, a ton shall be taken and held as t thousand (2,000) pounds.

In witness whereof the parties hereto have signed this agreement the day and y first above written. (Hearings, pp. 555–558.)

STRUCTURAL STEEL AGREEMENT.

AGREEMENT A.

This agreement, made and entered into this 1st day of January, 1897, by and betw the Passaic Rolling Mill Co., Pottsville, Iron & Steel Co., A. & P. Roberts Co., Camb Iron Co., Phoenix Iron Co., New Jersey Steel & Iron Co., Universal Construction the Carnegie Steel Co. (Ltd.), Cleveland Rolling Mill Co., Jones & Laughlin St Co. (Ltd.).

Witnesseth that the above said parties have mutually agreed to and with each ot to form an association to be known as the Structural Steel Association of the Uni States.

First. Each of the above parties named, being manufacturers and sellers of steel I beams and channels of sizes not less than 3 inches in depth, shall, by reason of such manufacture and sale, be entitled to membership in this association, and each of the parties hereto shall be entitled to such portion of all sales by parties hereto of I beams and channels of sizes not less than 3 inches in depth (except I beams and channels for use in car construction and deck or bulb beams) as is allotted to it under the following table:

	Per cent.
The Carnegie Steel Co. (Ltd.)	49⅜
Jones & Laughlin (Ltd.)	12⅞
A. & P. Roberts Co	11½
Passaic Rolling Mill Co	6
Phoenix Iron Co	5
Cambria Iron Co	5
Universal Construction Co	4¼
Pottsville Iron & Steel Co	3
Cleveland Rolling Mill Co	3
	100

It being understood that members of this association having bridge works wherein beams and channels, as covered by this agreement, are consumed shall report to this association all shipments to such departments and pay the agreed pool tax as hereinafter provided on shipments so made (except such as are used in the construction of buildings for their own respective works, which tonnage shall be reported and credit given therefor).

Second. The officers of this association shall be as follows: A president, a treasurer, a commissioner, and an executive committee consisting of three members (the president being a member of the executive committee ex officio).

Third. Each member of this association (the New Jersey Steel & Iron Co. excepted) shall, on or before the 10th day of February, 1897, and on and before the 10th day of each and every month thereafter during the terms of this agreement, or any extension thereof, render to the commissioner of this association a statement, which statement shall be sworn to or affirmed to by one of the principal executive officers of the member so making the report, or in case the member so making the report is a copartnership, then in that case the report shall be sworn to or affirmed to by one of the firm holding membership in this association, which oath or affirmation shall be to the effect that the report so made is a true and correct report of all the material described in the first clause of this agreement which was shipped by the member making the report during the month for which the report is made; the form of the report and oath or affirmation as to its correctness shall be furnished by the commissioner. And upon the commissioner's receiving from the respective members their reports, as aforesaid, he, the commissioner, shall render to each member monthly, as soon as possible after the receipt of all the statements of all the members, copies of statements last rendered by each member, and shall forthwith "state an account," charging each member who has shipped during the month more than its or their percentage of the total amount shipped by all the members of the association the sum of five-tenths cent per pound on each and every pound of such excess and crediting each member who has not shipped its or their percentage of the total amount shipped by all the members of the association with the sum of five-tenths cent per pound on each and every pound which it or they fail to ship during the month for which the reports are made, as aforesaid; and as a basis of calculation in making such "statement of account" the commissioner shall use the table of percentages as set forth in the first clause of this agreement.

And upon the statement of such account by the commissioner he shall immediately mail a copy thereof to each member of this association, and within five days after the receipt of any account by the member of this association, which account shall sh that the member receiving the same is indebted to the association, the member receiving its or their account showing its or their indebtedness shall forward to treasurer a check or sight draft drawn to the order of T. Mellon & Sons, in paymen such indebtedness, which check or sight draft the treasurer shall deposit in the s T. Mellon & Sons' bank to the credit of this association, and immediately upon the tre urer receiving from the members all their respective remittances, in payment of th indebtedness to the association, for any month, he, the treasurer, shall notify respective members whom the aforesaid "account stated" shall show to be credit of the association for any month to draw on him (the treasurer) for the amount due them as shown by said "account stated," and upon receipt of their several drafts made the treasurer shall accept the same payment at T. Mellon & Sons, and charge amounts thereof to the fund created by the payments made by the members w shipped in excess of their proportion during the month for which the "account state was made, thus closing that account each month.

Fourth. To insure the rendering of the statements and the settlement of the b ances due between the members of this association at the time required by the pro sions of this agreement, each member (the New Jersey Steel & Iron Co. except shall, immediately after the signing of this agreement, remit to the treasurer its their check or sight draft for the sum of $2,500, and shall, on or before the 10th day each month thereafter, remit its or their check or sight draft for $500; the said che or sight drafts shall be made in favor of T. Mellon & Sons, who shall become the pository of all the proceeds of such checks or sight drafts, which shall form a guara fund and be held by said T. Mellon & Sons during the continuance of this agreeme or any extension thereof, and disposed of finally as hereinafter provided.

It being understood that when the said guaranty fund reaches the sum total $45,000, that the payments toward said fund shall thereupon cease.

Fifth. Whereas it has been agreed by and between the several other memb and the New Jersey Steel & Iron Co. that the works of the said New Jersey Steel Iron Co. shall remain inoperative in the manufacture of **I** beams and channels, sizes coming under the provision of and during the life of this agreement, in cons eration of which the New Jersey Iron & Steel Co. shall receive from this associati the sum of $5,000 per month. Said sum of $5,000 to be paid by the several other me bers in proportion to their allotments as shown by the table in the first clause of t agreement. On the tenth day of each month the treasurer shall draw at sight on t respective parties to this agreement for the proportionate amount of the indebte ness and when all such drafts shall have been paid, he shall immediately notify t New Jersey Steel & Iron Co. to draw upon him at sight for the sum of $5,0 thus closing this account each month. In case any draft which the treasurer sh make, as in this clause provided, shall not be promptly paid, the amount of su draft shall be taken from the deposition the guarantee fund of the party failing pay such draft, and payment made to the New Jersey Steel & Iron Co., the sa as if all such drafts of the treasurer has been paid, and such party shall immediat remit to the treasurer an amount sufficient to make good the sum so taken from t guarantee fund.

Sixth. Whereas it has been agreed by and between all the members of this as ciation (the New Jersey Steel & Iron Co. excepted) to exempt all members exc the Phoenix Iron Co., to the extent of 5 per cent of 300,000 tons, in the proporti expressed in the table of allotments contained in clause 1 of this agreement; t aforesaid Phoenix Iron Co. to be exempted to the amount of 11,000 tons; the p assessment shall not be charged an any member's shipments until it or they sh have completed its or their quota of exempted tonnage.

Seventh. It is required that all **I** beams and channels shipped into the States b dering on the Pacific coast and to be actually used in the territory into which it shipped and also all I beams and channels actually exported for use outside the limits of the United States be reported to the commissioner together with bills of lading or other evidence of exportation satisfactory to him (said evidence to be confidential and not to be circulated among the members). Such tonnage will be deducted from the member's report and the agreed pool tax charged on the balance.

Eighth. Upon receiving the written request of any one member of the association the commissioner shall call a meeting of the parties to this agreement, to be held within five days from the date of his receiving such written request.

Ninth. If at any time any of the parties hereto shall have reason to suppose that any other party or parties to the agreement have violated any of the provisions of this agreement, the said party so supposing the agreement has been violated shall file with the commissioner of the association a bill of complaint against the party or parties so suspected of such violation, which bill of complaint shall fully set forth the act or acts complained of, together with all the matters or things connected therewith. The said bill of complaint shall be in writing and shall furnish all the evidence that can be submitted in connection with the alleged violation, and upon receipt by the commissioner of any and all bills of complaint as aforesaid, he shall forthwith use his best offices to have the accuser and accused arrive at an amicable settlement, failing in which, he shall submit all the information he may have to the executive committee for action. If the said executive committee shall determine that the charges have been sustained, they, the executive committee, shall impose a penalty not less than $1,000, nor more than the amount standing to the credit of the member so punished in the guaranty fund at the time the fine is imposed upon the party so adjudged as having violated the agreement, but if the executive committee shall determine that the charges have not been sustained, they shall dismiss the complaint from further consideration by them. It being further understood and agreed that no member of the executive committee shall act upon any bill of complaint made by or made against the member of the association which he represents, nor shall any representative of a member of the association vote upon any bill of complaint brought by or brought against the member of the association which he represents. Any penalty imposed by the executive committee will be collected by the treasurer, deducting the amount thereof from the deposit made by the member against whom the penalty is imposed to the guaranty fund, as provided for in clause fourth of this agreement, within two weeks after such penalty is thus imposed, the sum thereof shall be transferred pro rata as per allotments to the accounts of the members of the association, excluding the member against whom the penalty is imposed, by the treasurer of the association, in which case the member so punished shall immediately remit an amount sufficient to make good the sum taken from the guaranty fund.

In case the offending member should appeal to the association and the action of the executive committee should not be sustained by a majority vote of said association, then the fine imposed shall be remitted and any sum that the member may have paid into the association by reason of this shall be returned.

Tenth. No member of this association (the New Jersey Steel & Iron Co. excepted) shall make any lump-sum bid, nor shall they or it erect any building, directly or indirectly. This applies only to members as "Rolling Mills." Any question arising as to the interpretation of this clause shall be referred to the commissioner for his immediate decision.

Eleventh. No consideration in the nature of brokerage or commission is to be allowed, except to the accredited agents of the parties to this agreement, whose names shall be on file with the commissioner; and in no case will it be permissible for such commission to be divided.

No sales or contracts shall be made to or with middlemen except on specific work for immediate specifications.

All sales between parties to this agreement shall be at pool prices, as provided i agreement "B," and all shipments shall be reported by the manufacturer, on whic the pool tax will be charged the same as to outside parties, the purchaser also to repo shipments of all such material so bought, for which they shall claim and receive credi

Twelfth. At any meeting of the members of this association, called by the con missioner as herein provided, any party or parties may give notice of withdraw herefrom, but no such notice shall take effect until January 1, 1898. If the aggr gate pool percentages of the parties giving such notice of withdrawal shall amount t less than 4 per cent, this agreement shall continue in force as between the remainin parties, but if such aggregate shall amount to 4 per cent or more this agreement sha terminate at the time so fixed. But statements shall continue to be rendered of a I beams and channels shipped up to date of its termination, the pool assessment.

Thirteenth. The percentages of the parties hereto or of their successors (includin as such any concern mainly owned or controlled by any of the said parties or an of their stockholders), shall be maintained in the same relative proportion unt otherwise agreed, and if any party shall at any time have more than one successor c allied concern, the aggregate percentages allotted to itself and all its successors an allied concerns shall not exceed the percentage that the original concern would hav been entitled to if it had continued alone its relations to the other parties under th agreement, and the parties thereto shall include in their statement the shipment for such successors and allied concerns.

Fourteenth. In case other firms or corporations are admitted as partners to thi agreement, the percentage of the pool allotted to each shall be deducted pro rata fro the percentages of the members immediately prior to the time of its admission; an in case any of the parties hereto or any of the parties hereafter admitted shall with draw, the percentage of the pool allotted to such withdrawing party or parties sha be added pro rata to the percentages of the parties remaining. In such case th commissioner shall compute and report the new percentages to the nearest one hundredth of 1 per cent, which degree of accuracy shall be deemed sufficient.

Fifteenth. The allotment herein made of percentages, the amount of the guarant fund, and the payment made to the New Jersey Steel & Iron Co., as herein provided shall not be altered, amended, or changed in any respect, except by the unanimou consent of all the parties to this agreement, but any other matters or things whats ever which concern this agreement or the association formed thereby or any regula tions hereafter adopted, may, at any time, be abrogated or amended or altered at an meeting of the members of this association, provided that two-thirds of the membe of the association are present thereat, that they represent at least two-thirds of th percentage allotted to all, and vote in favor thereof.

Sixteenth. To provide for the prompt payment of all salaries, rents, and othe expenses (except the payment which is to be made monthly to the New Jersey Ste & Iron Co.), a general expense fund shall be called in as needed by the treasurer i proportion to the percentage allotted each member in the association.

Seventeenth. No matter of account or understanding outside of this agreemen shall affect the settlements herein provided for, either as an offset or otherwise, nc shall any written or unwritten agreement of the parties hereto, or any of them, t establish and maintain uniformity in prices, or any controversy arising out of suc agreement, or any failure to carry out any of its provisions, or to maintain price affect in any way the rendering of the statements and the making of the settlement therein required.

Eighteenth. Whenever this agreement shall have been terminated the balance c the deposit, with accumulated interest, remaining in the hands of the treasurer t the credit of each party, after provision shall have been made for the payment of a expenses, shall be returned to it, provided it shall have rendered all the statement required from it under this agreement and have paid all its debtor balances. In case any party hereto shall not have fulfilled its money obligations under this agreement, the amount it has on deposit in the guarantee fund shall be applied toward the fulfillment of those obligations, and the excess, if any, returned to it. But in case any party shall not have fulfilled its agreement to render the monthly statements under this agreement, the amount it has on deposit in the guarantee fund, or the excess thereof, as above stated, shall be divided among the parties who shall have fulfilled their obligations under this agreement, in the proportion of their respective percentages.

Nineteenth. At the expiration of this agreement, or at any time the president of the association, together with the majority of the executive committee, determine that it is advisable that all or any part of any funds belonging to the association shall be withdrawn from the depository then holding the same, upon notification by the president and a majority of the executive committee of such determination being given the treasurer, he, the treasurer, shall make and sign a sight draft or check upon the depository so holding such funds for the sum named in such notification, which check or sight draft shall then be countersigned by the president or one member of the executive committee, and when such checks or sight drafts are so made and signed by the treasurer and countersigned by the president or one member of the executive committee and duly presented for payment at the office of the depository holding the funds of the association, all such checks and sight drafts shall be paid by such depository.

Twentieth. For all purposes of this agreement a ton shall be taken and held of 2,000 pounds.

In witness whereof the parties hereto have signed this agreement the day and year first above written. (Hearings, pp. 1813-1817.)

VIEWS OF MR. LITTLETON.

Before entering on a discussion of the general question, I desire to distinctly dissent from the bill presented by the majority.

The most pretentious bill presented by my Democratic colleagues is one as to parts of which there has been much discussion. The fundamental fault manifest throughout this bill is that it legislates primarily and directly at the size of industrial units. It preserves the chief fault of the Sherman law, which is the policy of a belated attack after a concern has grown up instead of providing any means of prevention. It fails utterly to confer upon any governmental agency the power to see to it that concerns in restraint of trade do not grow up. It distinctly treats the symptoms and ignores the disease. It does not establish any agency which, through the enforcement of specific statutes, can insist upon those initial safeguards without which all effort to reach the wrong must fail. Under its provision overcapitalized concerns with the power of holding companies may, without challenge, enter and continue in the field of interstate commerce. The real truth is that the bill is simply a complicated rearrangement of the rules of evidence and the burden of proof under existing law, without a serious effort to meet and rightly solve the great industrial problems which have grown up since the existinglaw was enacted; and even this rearrangement of the rules of evidence is contrary to every notion of English and American jurisprudence. It has been compared with the railroad law requiring railroads, when challenged, to show that their rates are reasonable. It really is a contrast instead of a comparison. A man or a concern may obtain control of 30 per cent of the business in which he or it is engaged by sheer efficiency. He or it may have no way of knowing how much or little trade is restrained or extended because of this. The effects of these acts are as wide and infinite as all the ranges of commerce and business. The effect is external and beyond them. In the case of a railroad the knowledge of the reasonableness is peculiarly in their possession.

In the proposed bill, under section 9, Subdivision C, "restraint of trade" is defined as follows:

"The words 'restraint of trade' mean in restraint in any respect or to any extent of trade or commerce among the several States or with foreign nations."

Under this definition no business could be conducted that is not
restraint of trade, if by restraint of trade is meant restriction of con
petition. If 10 men start in the same line of business and 2
them survive, with the volume of trade of that business increased
hundredfold, they have extended the trade, but they have undoub
edly restricted the competition to the extent of the 8 competitors.

The confusion which is perpetuated in this bill between restrai
of trade and restraint of competition will cause no end of difficult
It may be in a given case or in a number of cases that the extensio
of trade will result only from the limitation of competition. To sa
that when it shall appear that any concern or combination of co
cerns is in restraint of trade and that it controls more than 30 p
cent of the value of the total quantity of that trade sold to the Unite
States or more than 30 per cent in value of the total quantity sol
in that part of the United States to which such concern extends, i
such case such concern will be required at the suit of the Gover
ment to prove that the restraint is reasonable, is to multiply th
difficulties.

We have endeavored, after months spent in patient inquiry, t
present the facts concerning the organization and operation of th
United States Steel Corporation. We have seen how from th
very beginning the tendency has been marked toward the consol
dation of competing concerns, and we have the example of th
largest industrial company in the world as illustrative of a tend
ency in all modern industrial life—a tendency which seems to b
moving resistlessly toward the substitution of some sort of coope
ation in place of the old trade war. It is perfectly clear that th
good which may be done by the development of this tendency ma
be in a great measure nullified by the evils which unchallenge
power in the hands of a small group of men would invite. Th
question is larger than the simple destiny or lifetime of the Unite
States Steel Corporation. The question is much more far-reachin
than a simple approval of its good points or an occasional anima
version upon its bad points.

The lesson which this record teaches, if it teaches anything, i
that the American Government is confronted in the handling
its corporate problems with the most difficult economic and indus
trial problem of its history—a problem, in the first place, whic
defies the narrow limitations of partisanship and at once challeng
the patriotism and wisdom of men of all parties; a problem, indee
which is not improved by the dissolution of existing concerns exce
in so far as that dissolution furnishes a basis for constructive legi
lation which will prevent the recurrence of the evils and make su
and certain the good which cooperation and organization can do.

After all, the question which we first meet is, What is to be the attitude of the Government toward business—business in its corporate form, business in its large corporate form, business in cooperative corporate form? Must there continue to be a war of extermination on the part of the Government met by a policy of evasion and intrigue on the part of business?

The first requisite of any policy which the Government may adopt, or any statute which it may enact, is that that policy or that statute will make the Government's attitude toward modern forms of industry absolutely certain—an attitude defined and written into its laws through the agencies which have been established by the Constitution for writing these laws, and not an attitude growing out of the particular humor or whim of any department of the Government or bureau under that department. The certainty of the Government's policy will insure respect for its authority on the one hand and create and maintain stability in legitimate business upon the other.

The business device known as a corporation and its almost universal adoption in the business world have made these problems grow much more rapidly than the public understanding of them. The very fact that the grant of a corporate charter comes from the sovereignty of the State made in some measure every corporation organized a large or small problem in the policy of every State. As they combined or extended their operations into other States these problems increased with their endless complications. How to keep them within their corporate charter, how to prevent oppression, how to fix liability, how to insure honest management, how to prevent hurtful overcapitalization, how to prevent combinations of concerns hurtful to commerce, how to keep separate the carrier from the manufacturer, these, at first problems for the State in which the corporation was organized, grew to be problems for every State into which it extended its business; and finally became a great national problem in so far as it was located in the field of interstate commerce.

The advantage of legitimate corporate development is beyond any intelligent question. The true corporation has the advantage of assembling the most experienced and intelligent men to direct its affairs and shoulder its responsibilities. It has the advantage of gathering to itself a little of the wealth of a great number of men without embarrassment to them, which enables it, by reason of the total sum thus gathered, to do big things. It has the advantage of being able to distribute in shares the value of a property or plant or enterprise infinitely. It has the advantage which comes with concentration, the economy of organization, and the combination of the wealth of many. Rightly understood and honestly administered, it represents the cooperative enlightenment of modern business. It stands for the collective energy, intelligence, and wealth of modern industry. It is the most flexible, resourceful, convenient, and effe tive instrument yet devised by man to bring forth, manufacture, d tribute, and market the raw wealth of the earth.

The rapid growth of corporations in the United States is seen in t report of the Commissioner of Internal Revenue, in which it is shov that 270,202 corporations, whose income is in excess of $5,000 ann ally, report to him for the purpose of taxation under the corporatio tax law. These have an aggregate capital stock of $57,886,430,519.0 a bonded and other indebtedness of $30,717,336,008.84, and an aggr gate net income of $3,360,250,642.65. We may make liberal allo ance for the overcapitalization of these concerns as represented l these figures, and yet we can not fail to consider the true character this colossal wealth. It is being administered and conserved in co porate form. It is distributed in shares, and as such it affords tl surest guaranty of the inviolability of the right of private proper because of the easy and convenient distribution of these shares ar the little care required in their possession and ownership. The shares and bonds offer an almost unlimited field for the investment savings by the individual, who can hold and own his investment ar receive its returns and yet pursue daily his own business or professio

What are the other kinds of properties in our country? How do v judge it? How do we estimate the thrift and enterprise of the peop of our country? Over against this corporate wealth, revealed in tl figures just submitted, let us set down that property which is di tinctly individualistic, which has little of the character of collecti ownership—that naked individualism for which agriculture stand The estimated value of the farm products of this country for tl year 1911 is $8,417,000,000. This is the gross value of farm product without subtracting the cost of production. No estimate has bee made of the cost of this production, but it is not difficult to see th the net income from the farms and the net income from corporate collective property would not be far apart.

Thus we have on the one hand the great collective ownership property represented by these 270,202 corporate agencies, and the other hand the distinctly individualistic ownership of the far represented by this gross income of $8,417,000,000. Each of the classes of property, each of these fields of human activity, is necessa to the growth, welfare, and continued prosperity of our country. the ownership and use of all property in an orderly government mu be regulated by law, we are confronted with the question, Wh shall be the attitude of the Government toward these two distin classes of property? How shall we regulate and govern the use these sources of wealth in the hands of individual citizens? Ho shall we prevent the abuse of that ownership?

Of these two classes of property the corporate class presents the most difficult and complicated problem. The real question which engages now and will continue to engage the attention of those in authority is the question of how to preserve centralized industry, which is represented in the great corporate development of the country, and at the same time insure industrial liberty. In order thoroughly to understand and correctly solve this problem, it must be approached without prejudice, without passion, and without bias. In the distinctly commercial era in which we live the energy and ability of our strongest men is devoted to the getting of wealth. More than in any other period of the world's history we have cultivated and enlarged the creative faculties of our race, and while conspicuous instances of oppression, coercion, and wrongdoing have marked the growth and development of this era, it can not be that simple greed is the single impulse which drives the brains and hands of men to the great task which they have undertaken. It can not be that the mere love of ownership, the naked lust of gain, is the sole inspiration underneath the great work which men have set themselves to do.

In order to afford the fullest freedom to the people of our country to create wealth and acquire property, we have established and maintain economic liberty—that is, the right to work, to invent, to plan, to acquire, to own, and, finally, to have dominion over property. We have said to the individual, If you put your blood and brain and muscle into a thing called property, you shall become its owner, and shall enjoy and use that ownership for your comfort and happiness under a government of law.

So long as this was done by the individual by his individual labor and ability we did not need, and hence did not make, many laws to regulate his ownership and control of property. He could keep what he had, and the range of his economic liberty was almost unlimited. But when the corporate charter came into general use and men engaged in these enterprises, clothed these enterprises with these charters, the State, acting for the people because it had granted the privileges which the charters conferred, was required to take and hold supervision of these corporate enterprises, and it was just here that corporate development became involved in the first instance in the politics of the country. While the corporate enterprise remained wholly within a single State its regulation and control was exclusively in the hands of the State government, for the domestic sovereignty of the State was designed to deal with it and all domestic concerns. As a distinctly State problem it presented questions of capitalization, private monopoly, and taxation, and in public service corporations the additional questions of eminent domain, freight and passenger rates, and all features common to the regulation of railroads.

As these new and intricate corporate agencies were introduced new States they were challenged at each step in their progres the public; and the hostility to their use and adoption founc effective expression in many crude and ill-considered statutes wh instead of being directed toward a rational supervision of them, designed to indiscriminately outlaw them.

> In 1889 Kansas, Maine, Michigan, Missouri, Nebraska, N Carolina, Tennessee, Texas, and the Territories of Idaho, M tana, and North Dakota passed antitrust laws; and the States of Washington and Wyoming introduced similar provis into their constitutions. In 1891 Kentucky and Missouri in duced antitrust provisions into their constitutions, and Alaba Illinois, Minnesota, and the Territory of New Mexico ena similar laws. New York and Wisconsin followed in 1892; an 1893 California forbade combinations in live stock and Nebr forbade combinations in coal and lumber. Thirty States 2 Territories subsequently passed such laws, and in 17 St antitrust provisions were inserted in the State constituti (Gilbert H. Montague.)

Notwithstanding these States enjoyed to the full the authorit the common law, which for hundreds of years had denounced mo olies, and notwithstanding the fact that their development imp tively called for the employment of centralized capital in conven corporate form, these States, in order to translate their rage resentment into an offensive weapon, went far beyond the princi defined and settled by common law and enacted statutes dr in character, antagonistic in temper, and in many instances lar the product of political wrath rather than the result of wise delib tion, wholly or partially unconstitutional.

In 21 States it was made criminal for two or more persons to e into any agreement, reasonable or unreasonable, which preve competition in production or sale.

> In 17 States it was made criminal conspiracy for two per to agree to regulate the quantity or price of any article t manufactured, mined, produced, or sold, regardless of whe prices were raised or lowered. In 16 States it was criminal two or more persons to attempt to monopolize any commo In Missouri it was criminal conspiracy to maintain a trust, p combine, agreement, confederation, or understanding to regu prices or to fix the premium for fire insurance. In Mississ it was criminal conspiracy not only to regulate prices, but for two or more persons to settle the price of an article betw themselves, or between themselves and others. (Gilbert Montague.)

There were three States, West Virginia, Delaware, and New Jer which kept open the door which had been closed by the other St A corporate franchise can not be forfeited except in the State w the charter is granted, and then only when the laws of that partic

State are violated; and as West Virginia, Delaware, and New Jersey passed no antitrust laws, they could and did grant almost all of the charters to all sorts of enterprises which, when incorporated, proceeded into other States to do business at will. Thus the States which had enacted the most prohibitive laws against all conceivable forms of agreements and arrangements found themselves invaded by alien concerns which they were powerless to attack or dissolve.

The legislation which had been enacted in all but three of the States was the result of a failure to carefully study and fully understand the substantial welfare of these States. To be sure, it was just and proper to safeguard the consumer against those restraints of trade which the history of the common law had shown were against their interest. But how much more sensible and effective it would have been to have resorted to the common law for protection than to have cluttered up the statutes with this unseasoned assortment of political legislation. How much more statesmanlike it would have been to have looked the problem squarely in the face and to have realized that modern civilization had taken hold of these industrial and business agencies with which to work out the development of the country and to have exercised a cool and discriminating judgment in the rejection of these agencies, instead of stirring the passions of the people until they grew into prejudices, and clinging to these prejudices until they were enacted into laws. The very fact that these States did not content themselves with the ample remedies afforded by the common law, but rushed into crusades against corporate business which eventuated in these unreasonable statutes, indicates that in each State the question had been made a political one and leaders were driven, by the storm which they had raised, to do foolish and extreme things.

No one will ever be able to estimate the damage done to the growth of these States nor the extent of the restraint imposed upon the prosperity of their people by the unthinking prejudices which wrote these laws upon their books and fixed these policies in their creed.

In 1890 the Federal Congress, under the constitutional authority to regulate interstate and foreign commerce, enacted what has become generally known as the Sherman antitrust law.

It may be assumed that one of the controlling reasons for the assertion by the Federal Government of its unused powers conferred by the Constitution was the fact that three States continued to grant charters and suffer combinations which all of the other States were powerless to prevent and without ability to control, and that as these concerns were crossing and recrossing the lines of interstate commerce, it was thought expedient and necessary to draw a line around the field of this interstate commerce and set up a standard to which every interstate concern should finally conform.

Another and more general reason is to be found in the fact the close knitting together of the whole country by the count threads of communication had drawn the commerce of the States into that field located between the States; and the activity volume of this commerce called into exercise those long-dorm powers lodged in the Federal Constitution. However much or li these two reasons contributed, it is undoubtedly true that the im diate, acute, and irritating cause of the enactment of the Sherr law was the fact that concerns doing interstate business, and he not wholly within the reach of the corrective remedies wielded b single State, had entered into and were continuing to enter secret agreements to control the output, advance the prices. lower the quality of their products. The ungoverned and unguar field of interstate commerce furnished an unmolested territory wh these hurtful and antisocial practices could be indulged without f

The Sherman law was the result of much interesting and instruc debate, followed by practically unanimous vote, and for these reas alone should not be inconsiderately condemned. Furthermore, it been touched upon and reviewed in as many as 100 opinions of courts of our country in a serious effort to make its meaning clear its provisions effective.

The effect of the enactment of this statute was not plain to be s until the opinion of Mr. Justice Peckham in the Trans-Misso Freight Association case was handed down, in 1897. From 1890 u 1897 nothing occurred either in or out of court to indicate what attitude of the Government would be in regard to its enforcement, to what extent its enforcement would affect the then organized inc trial and business affairs of the country.

The decision of the Trans-Missouri Freight Association case, in 18 directed the attention of all business and industry to the fact t pooling arrangements and loose agreements between concerns restraint of trade, whether reasonable or unreasonable, were unlaw The effect of this decision upon the course of development in busir and industry was most unexpected.

The Sherman law was entitled "An act to protect trade and co merce against unlawful restraints and monopolies." Its first effect enforcement resulted in a united effort on the part of those engage business and commerce to do the very thing which it had b designed to prevent. It had been supposed that this act of Congr would strike asunder the vicious agreements in restraint of trade restore at least the competitive contest between the large conce engaged in business and industry. It was no doubt intended to m impossible all of the agencies, the vices, and subterfuges by which co petition was being eliminated from our business and industrial l

Just as soon as those engaged in business realized the effect of decision of the court in the Trans-Missouri Freight Association ca and that it construed the Sherman antitrust law to prohibit every agreement, contract, trust, or combination in restraint of trade, and that there could be no arrangement of any character between competing companies, they adopted one of two courses. Either they procured the organization of "holding" companies, to which they transferred the stock of the competing companies and in turn received a proportionate amount of the stock of the holding company, and thus consolidated into one great enterprise a number of smaller enterprises; or they procured the organization of a huge corporation with capital sufficient to embrace the combined capital of any number of competing concerns, then dissolved and wound up the constituent companies and transferred the physical properties to the newly organized concern. In either case, the result was the same, for we witness then the coming of those stupendous corporations whose dominance has alternately been the wonder and apprehension of this great corporate era.

It has been pointed out by Mr. Gilbert H. Montague in his excellent work on trusts that prior to 1897 there were not more than 60 concerns that were dominant in their respective trades. Within the three succeeding years, 183 corporations, dominant in their respective trades, were organized. In the year 1899 alone, 79 of these, with a total capitalization of $4,000,000,000, were organized. It has been estimated that these enormous combinations comprised one-seventh of the manufacturing industry of the United States; one-twentieth of the total wealth of the Nation; nearly twice the amount of money in circulation in the country; and more than four times the capitalization of all the manufacturing consolidations that were organized between 1860 and 1893. From 1897 and throughout the years following, until 1904, the country came to recognize and adopt the method of holding companies and huge corporations; and these were treated, tacitly at all events, as compliance with the Sherman antitrust law. Not until 1904, when the Northern Securities case was decided, was there a general, if not universal, revival of the antitrust crusade. The decision in that case marked the second epoch in the history of the Sherman antitrust law and its enforcement, and set on foot the prosecutions which from time to time have been conducted by the Government.

If the Sherman antitrust law, as it has been finally interpreted by the Supreme Court, had from the beginning been strictly enforced, and the policy of the Nation firmly established, one of two things would have resulted. Either industry and business would have taken on some new and competitive form, or the Sherman law would have been amended or supplemented. In any event, the tumult resulting from its interpretation and enforcement would have less of a nation's industrial structure to disturb and less of a nation's habits to change.

When the Government, either because of its failure or refusal enforce the law, had from 1897 to 1904 openly allowed the format of holding companies and the creation of huge corporations in wh untold wealth was invested, and to which incalculable interests l become attached, it was natural that the whole country should v with apprehension the sudden and drastic enforcement of the Shern law.

The country waited with obvious impatience the final decisions the Supreme Court in the Standard Oil and Tobacco cases. T Standard Oil opinion was delivered on May 15, 1911, and around t has revolved all industrial discussion since that time. The wh country, with patriotic unanimity and with a fine regard for the p eminence of that great court, has accepted its last word as law; l the economic conditions resulting from that interpretation is which the country is struggling with as it never struggled before.

We have seen what the effect of the decision in the Trans-Misso Freight Association case in 1897 was upon the industrial and busin development of the country. We have observed how an inact Government from 1897 to 1904 permitted the country to come to conclusion that huge industrial and business holding companies w legitimate agencies for the development and conduct of busin generally. Let us now examine, as far as we are able to do so, legal effect of the decisions in the Standard Oil and Tobacco cas and this can perhaps be better stated by reference to the opinion Mr. Justice White, in which he declares the conclusive meaning the Sherman Act as follows:

> In view of the common law and the law in this country as restraint of trade, which we have reviewed, and the illuminat effect which that history must have under the rule to which have referred, we think it results:
>
> (*a*) That the context manifests that the statute was drawn the light of the existing practical conception of the law restraint of trade, because it groups as within that class, not o contracts which were in restraint of trade in the subjective sen but all contracts or acts which theoretically were attempts monopolize, yet which in practice had come to be considered in restraint of trade in a broad sense.
>
> (*b*) That in view of the many new forms of contracts a combinations which were being evolved from existing econo conditions, it was deemed essential by an all-embracing enume tion to make sure that no form of contract or combination which an undue restraint of interstate or foreign commerce v brought about could save such restraint from condemnati The statute under this view evidences the intent not to restr the right to make and enforce contracts, whether resulting fr combinations or otherwise, which did not unduly restr interstate or foreign commerce, but to protect that comme

> from being restrained by methods, whether old or new, which would constitute an interference that is an undue restraint.
>
> (*c*) And as the contracts or acts embraced in the provision were not expressly defined since the enumeration addressed itself simply to classes of acts, those classes being broad enough to embrace every conceivable contract or combination which could be made concerning trade or commerce or the subjects of such commerce, and thus caused any act done by any of the enumerated methods anywhere in the whole field of human activity to be illegal if in restraint of trade, it inevitably follows that the provision necessarily called for the exercise of judgment which required that some standard should be resorted to for the purpose of determining whether the prohibitions contained in the statute had or had not in any given case been violated. Thus not specifying but indubitably contemplating and requiring a standard, it follows that it was intended that the standard or reason which had been applied at the common law and in this country in dealing with subjects of the character embraced by the statute, was intended to be the measure used for the purpose of determining whether in a given case a particular act had or had not brought about the wrong against which the statute provided.

In other words, the first section denounces "combinations, contracts, conspiracies, etc.," not of a particular class but of a general character; and whether or not they are unlawful can only be determined by accurately foretelling their ultimate effect on trade. It does not denounce contracts or agreements which do or attempt to do some specific thing, but it denounces contracts and agreements whose effect is general and well-nigh countrywide; so that a violation of the first section does not depend upon (1) the intent of the person doing the act, nor (2) upon the knowledge of the person doing the act, nor (3) upon the motive of the persons doing the act. But it depends upon whether the person making the contract is able to survey the whole field of interstate trade and to calculate with accuracy the final effect of his contract, and this final effect which he must be able to foresee must be so precisely foreseen and estimated as to enable him to say whether the effect is reasonable or unreasonable, due or undue, direct or indirect.

Having done this, he is not yet finished. He must make the concluding and all-important calculation as to whether his two estimates—to wit, the general effect of his contract on trade, and whether that effect is reasonable or unreasonable—will coincide with the opinion of the court before which his contract is to be construed.

The second section abandoned all effort at classification and, as construed, declares, in effect, that if any person does anything whatsoever which would result in the same thing that the acts denounced in the first section do result in, he has violated the law, so that a person capable of the foresightedness demanded by the first section,

having dismissed that section from his mind and honestly endeavo
ing to meet the requirements of the second section, is confront
with this problem: That anything which he may do, although ı
mention is made in the second section of the kind, quality, chara
ter, or extent of the thing he may be doing, which is afterwards he
to be an attempt to monopolize any part of trade or commerce,
an unlawful act and subjects him to punishment. The law in tl
first section, as construed, does not declare what sort of contracts a
to be considered as in restraint of trade. It does not declare what, i
the mind of the lawmaker, would amount to a restraint of trad
The lawmaker has no idea himself as to what should be deemed
contract in restraint of trade. But he leaves it to the man makin
the contract to judge for himself as to whether it is in restraint
trade and to judge at his peril. All that the Supreme Court ha
accomplished is to require the person making the contract to go on
step further and ascertain whether the effect of his contract upo
trade is reasonable or unreasonable restraint. Having to son
extent ascertained the strictly legal effect of this decision in th
Standard Oil case, let us inquire just what has been the general effe
of the decision on the business upon the country.

For a time at least, even if not at the present time, the distinctl
business section of the country stood still in a state of uncertaint
and doubt; those concerns already organized, in many instanc
fearful of prosecution; those concerns which were in contemplatio
arrested lest they should transgress the law. The immediate bewi
dering consequence was that a dense fog of uncertainty settled dow
upon and completely enveloped American enterprise. This cond
tion resulted in much discussion and many proposals of remedies.

When the result of the dissolution of the Standard Oil Co. an
the Tobacco Co. had finally been worked out and the countr
came to understand, as fully as it could understand, the compl
cated readjustment which took place in the affairs of each of thes
companies, the weight somewhat shifted to the other foot. Th
leaders of radical thought in the country and those most extreme i
their desires to restrain and repress the organization of large indu
trial units suddenly took alarm. Their view was, in homely speec
that "the mountain had labored and brought forth a mouse," an
they began to bitterly complain of the ineffective and impotent m
chinery of the Sherman law, so that to-day we have two distin
antagonistic classes of public opinion in regard to the wisdom an
efficiency of the Sherman law as enforced. One class rather leans t
the opinion that if its worst is no worse than the result in the Stan
ard Oil and Tobacco cases, then its worst can be endured. The oth
class maintains that if its best and highest efficiency is exemplified i
the Standard Oil and Tobacco cases, then at its maximum enforc

ment it is impotent and inadequate. It fact, organized business generally, while welcoming a short period of peace, lives in dread of the future; organized politics stands confused in front of the problem; and organized labor incessantly demands the amendment of the Sherman antitrust law. Neither the radical nor the conservative in politics is satisfied with it. Neither organized labor nor organized capital approves it.

With the question in this unsatisfactory condition and the public mind in this unsettled state, and the welfare of our country vitally interested in the right and just settlement of the problem, we are confronted with the specific question as to what step should be taken by the legislative branch of the Government to bring about its solution. What we stand in need of, what we most desire, is not felicitous phrases, incisive epigrams, or turgid editorials, but a clear pointing out of the steps which can be taken, and which should be taken, which will be effective in reaching a right solution.

The question is one which reaches down through the very vitals of business and commerce to the foundation of the country's prosperity, and its remotest influence finds its way to the very farthest end of the detail of the lives of our people. The thoughtless disturbance of this great and extensive fabric sends a tremor of uncertainty and fear far down to the very ends of human interest and employment. No one man knows enough to know the full and final influence of a change in the established policy of dealing with these concerns. There is no such organized difference of opinion between the political parties as would require the settlement of this question either properly or necessarily as a political adjustment. There is no line of cleavage between political parties upon this industrial question, either as to what the end desired is or the means adequate to reach that end. It is of the utmost importance that the question as a whole should be cut clean loose from the agitation and uncertainties of politics and dealt with upon the bare questions of intrinsic merit. Therefore it is my opinion that the legislative branch of the Federal Government, in whose hands the question is exclusively lodged, should create a joint body of the Senate and the House for the purpose of considering the whole question.

This committee should be created without regard to the political affiliations of its members. This would provide a rational, constitutional method of treating the question. The committee should take counsel and advice of organized capital and organized labor. It should consult the interest of every class of citizens and should ascertain as far as possible the effect of legislation upon each class. It should inquire into the experience of other countries in dealing with industrial growth and corporate development, study the measures

adopted by these countries, analyze the results of these measures, a
profit, as far as possible, by their experience. Its sole aim and obj
should be sound legislation. This committee should examine ca
fully all of the judicial interpretations of the various courts of o
country of the Sherman law in order to fully understand its judic
history and its judicial growth. The committee should careful
analyze the result of the enforcement of the law, particularly t
result as illustrated in the reorganization in the Standard Oil and T
bacco Co. cases—this with a view of determining whether its enforc
ment has cured the evils denounced by the Supreme Court in
opinion.

The selection of such a committee would concentrate the ener
and ability of the legislative branch of the Government upon t
solution of this problem. It would focus the attention of the wh
country upon the committee and its work and reduce under its imp
tial and judicial inquiry the agitation of this country to orderly a
constitutional treatment.

This committee could draw a line around the field of intersta
commerce and consider, first, under what terms and conditions co
cerns desiring to do interstate business should enter this field, wheth
by Federal license, Federal incorporation, Federal registration,
Federal certification. Second, just how elaborate and exacting the
terms and conditions should be. Third, this committee should co
sider what laws should be enacted to govern concerns in this field
interstate commerce after they had complied with the terms and co
ditions of their entry. Fourth, the committee could consider t
manner in which an offending concern should be excluded from t
field of interstate commerce and devise an orderly and constitution
method by which the concern condemned in the eyes of the la
should be excluded from this field and wound up.

In fact, such a committee, giving its time, industry, and intelligen
to the solution of this problem, would insure order in the place
chaos, impartiality in the place of partisan appeal, and judicial temp
in the place of political rancor.

If you should ask me what I, as an individual, think would be
solution of the question, I can give you a general indication of n
views, conscious that they fall short of a complete remedy and anxio
that they shall be considered only as a suggestive contribution rath
than a perfected program.

The real vice in the treatment of the whole problem heretofore h
been the attempt to legislate solely against the result or effect of
series of acts instead of specifically defining and prohibiting the
acts. In an effort to prevent and punish confessedly conspicuo
evils, we have set all business groping and feeling about with unce
tain step like a man in the dark. We must first realize that comp
tition is the final law of all life, but that it is a growth, just as cooper

tion is a growth; that it is the law of trade and barter and not the law of statutes; that no government ever had roots so deep or standards so high as to be able to enforce compulsory competition any more than the mightiest man is able to make the right hand the earnest competitor of the left. It will always exist at one time or another, but it can not be legislated into commerce any more than it can be legislated out of commerce. To be exact, it is not competition which we seek to maintain but the unhindered right to compete. We do not make men go into business to compete with others. We maintain just laws so that if a man chooses to go into business and has the efficiency to win in the contest he shall not be molested in his pursuit. Competition is not a concrete and stationary thing to be preserved. It is an ebbing and flowing tide of industrial life which may run high upon the shores in one period and ebb into the middle of the sea in another

To change the figure, it may be strangled to death by superior strength unjustly used. It is an ever-changing, ever-diminishing, ever-enlarging condition of industry. It is a state of industrial liberty and economic freedom. It must be free but not by coddling the inefficient or holding everyone back for the laggard. It is bound to mean a reduction in the number of competitors but not a permanent appropriation of the thing competed for. In the hard struggle of industry and business life there must be an elimination of those who are unable to endure it, but this elimination should be solely upon the inability of those eliminated to survive an honest contest waged under the most enlightened rules of business warfare.

When corporations found that it was necessary and profitable to combine and either turn themselves over to a holding agency or dissolve and unite in one huge corporation, they did it in order to economize in the expense of administration and to enable them to control prices. Whatever the purpose was, the effect in many cases was to give the holding company or the huge corporation the monopoly of the business in which it was engaged. We were confronted then and we are confronted now with the question as to how we should deal with the monopoly, and it is by no means an easy task.

In many of our constitutions and most of our laws we have forbidden the creation of monopolies by the Government; that is, we have said that no concern should be granted the exclusive right to do a particular kind of business and, except in the case of allowing exclusive patent rights, we do not grant such rights; but the withholding of such grants by the Government has not prevented monopoly.

We have monopolies which have been created by individual ingenuity and effort, and it is this individual ingenuity and effort with which the Government must deal in attempting to prevent or regulate monopoly.

There are monopolies which have been built up by unfair practic employed against competitors, such as the getting of rebates, the u of large amounts of capital to starve out the competitor, the selli below cost to drive a less resourceful competitor out of business, t getting control of the sources of supply of necessary raw mater so that no competitor could get it except at prices which wou bankrupt him, the advantages of high tariff so that no similar artic could be brought from abroad.

Then there is the monopoly which is created in the first instan by the promoter who collects a large sum for the work of putti several or many concerns into one, and this is made possible by t hope of the different owners that they will add to the value of wh they have the combination value, and that they will get a larg dividend without the great cost and trouble and maintaining sever establishments. This monopoly also offers the attraction of spec lation, which to many is a great temptation.

Now, these two classes of monopoly are abnormal and result fro the desire of a few people, by fair means or foul, to take a short c in getting money. They do not represent the efficiency of combin tion nor do they promise any benefit to the public.

√ There is still another and third kind of monopoly which presen a much more difficult problem and which must not be confused wi the first mentioned two classes. This kind of monopoly is the resu of an intelligent organization, skillful combination, and prov efficiency. There can be no doubt that organization when intellige and systematic; combination when brought about for the purpose embracing all of the processes from the beginning to the end of t manufactured thing; and proven efficiency in the actual work production or manufacture, will improve the quality of the thi produced, reduce the cost of production, and cheapen the price the consumer. Such monopolies, so created, stand for the best th is in our civilization. They represent the survival of the highe efficiency. They are simply the winners in the final contest of co petition. Because of all these qualities which they have, all these advantages which they enjoy, such monopolies in differe fields of endeavor may come into exclusive control of the thi which they manufacture or produce. In other words, by orga zation, combination, and efficiency they may drive all competito from the field. This leaves them in such unchallenged control th they are able, at least for a time, to do much harm to the public unrestrained, because the public must go to them and no one else f the thing which they manufacture or produce.

The question presents itself, then, In what way are we to deal wi these three classes of monopolies? How are we to treat each? C we apply the same laws to each?

While they are each created by different methods, varying in their character from strangulation of competitors to simple superiority of work and skill, they each at last come to control the thing manufactured or produced so as to be able to extort from the public an unreasonable price. We can not say we will make it impossible for any one of the three classes to exist, for in doing so we throw away the very fruits of organization, combination, and efficiency. We can not prosecute skill as a crime along with coercion. We can not indict organization as an offense along with conspiracy. We can not punish efficiency as guilt along with oppression.

We must establish some rules which will permit the best that is in our race to develop and yet keep in check the worst that is manifested.

In my opinion, we should make definite laws governing competition. These laws should be specific as far as possible in defining and punishing unfair methods of competition. They should prevent holding companies, secret rebates, underselling for the purpose of driving out competitors, factors' agreements, and exclusive control of raw material, such as ore, coal, or oil; and they should prohibit the combination of corporations producing the same things in the same way for the purpose of controlling prices. They should authorize any person injured or threatened with injury to apply for an injunction to prevent the threatened injury. Competitors should be made by law to play fair, and the means of enforcing this law should be in the hands of every man who is about to be injured by the unfair play. We should so enact these laws as to make it impossible, or well-nigh impossible, for a monopoly of the first two classes named to be built up on unfair practices and foul tactics, and then provide that if by chance one should escape the prevention of these laws and grow up the Government would not only prosecute it, but actually destroy it and every vestige of its existence.

Now if, with these laws demanding fair play in competition thoroughly enforced, a concern belonging to the third class should, by intelligent organization, skillful combination, and high efficiency, and without resort to any of the unfair means denounced by law, produce the best and cheapest article and one by one drive all competitors from the field and come into complete control of that field, what shall the Government say to that concern? If it should undertake to prohibit the steps taken by the concern, it would be legislating against intelligence, skill, and efficiency. If it should undertake to denounce the concern as a monopoly when it had come into complete control of the field, it would be denouncing the fruits of intelligence, skill, and efficiency. In whatever way the Government should undertake to prevent the growth and prosperity of such a concern, it would, after all, be trying to prevent the useful employment of the best that is in the human race.

But you ask, How are we to prevent this concern when it has co into complete control of the field by driving out its competitors fr raising the price and reducing the quality of the thing produce You will be answered by some that the only way is for the Gover ment to regulate the prices to the consumer. This contention is jus fied on the ground that the control which the monopoly has obtain gives it such a power for public injury that the Government, acti for the public, has a right to prevent that injury. I think if it we true that the monopolistic control thus obtained did give such permanent power to injure the public the Government would have perfect right to prevent that injury even by the regulation of price but I think those who have reached this conclusion have done hastily and without considering all of the elements of the situation.

If monopoly is the result solely of intelligent organization, skillf combination, and proven efficiency, and if unfair methods are ma unlawful and the means for preventing these methods are ma speedily effective, if the unhindered right to compete is preserv in full and the field kept entirely open and the monopoly may n prevent or check the coming of competition, then by the very la and logic of its creation the monopoly must charge reasonab prices and keep up the standard quality of the article; for as could not have driven competitors from the field except by brea ing the law on the one hand, or by the highest efficiency and t lowest prices on the other, it can not prevent the return of co petitors except by breaking the law on the one hand or maintaini the highest efficiency and the lowest prices on the other. And in each instance, the law requiring fair play is enforced, the mono oly must keep its control by the same means that it got control- that is, by intelligent organization, skillful combination, and prove efficiency—all within the law governing competition. The mome that a monopoly raises the prices or reduces the quality of its artic it invites into a free and open field all of the competitive ability a ingenuity in the country—that very same competitive ability a ingenuity which it drove out of the field.

The point is keeping the field free, protecting competition, maki the rules of competition fair. No doubt for a short time the monopo could reap a harvest of high prices, but with this protected comp tition its harvest would soon be cut short.

It is my belief that the Federal Government should resolutely ch lenge every corporate concern seeking entrance into the field of inte state commerce, and compel it to conform to a standard which w insure, first, that the concern has behind every issued share of sto the real value which the share represents, not only for the protecti of those who buy the stock, but to insure that it will not lower t standard of its product to force a dividend on excessive capitalizatio and thus tend to demoralize the industry in which it is engaged. T do this effectively, both as a security to the public and as a reacting influence upon the policy of the States, the Federal Government should require corporate concerns entering the field of interstate commerce to submit their status, their true condition, to a board created for that purpose. A report of each company, examined with full and authentic data should be kept, and the rules governing the conduct of the board should be enacted into law by Congress; and no concern should be allowed to enter the field of interstate commerce until the board had issued a certificate to the effect that the concern had complied with the law governing its admission. The board should not have the slightest discretion as to what classes or kinds of concerns should be admitted, but only the right to say that it had complied with the laws enacted by Congress. This certificate issued by the board should contain a statement of the laws governing their admission and should stand for and in the place of a charter entitling the concern to do interstate commerce. It ought to be provided that this certificate should be forfeited for a violation of the conditions of entry, as well as for a violation of any law governing the transaction of interstate commerce or business—this forfeiture to be upon notice and after a hearing. Thus at the very foundation of interstate commerce the Federal Government would take a good grip upon the instruments and agencies engaged in it, and would hold that grip against the commission of economic wrongs and evils.

We are, of course, confronted with the still more difficult problem as to how to treat the vast number of concerns already engaged in interstate commerce. In other words, to make drastic regulations as to all future concerns entering into interstate commerce and leave unregulated and undisciplined those already engaged, which, without restriction, have been allowed to enter into that field, would produce discrimination at once unjust and harmful to the new concerns seeking admission as well as to the commerce of the country. The acts of Congress governing the admission of concerns into interstate commerce could be so framed, no doubt, as to require a gradual compliance with them by those concerns already in the field, so that the readjustment would make them all equal in the eye of the law, equal in their regulation, and at the same time be accomplished without too sudden a disturbance of those which have entered without challenge.

One of the fundamental difficulties is the slipshod way in which companies go into interstate commerce and the loose and unsound way in which they are incorporated. Having set up the machinery through which companies coming into interstate commerce must pass, having erected a standard by which they must be tested, and put upon them a restraint which can be exercised for the protection of the public, it seems to me that we could then proceed to enact some specific laws for their guidance and control. They should not be directed merely toward reducing the size of industrial units. Thei purpose should not be to make the contest an even contest by law There should be no handicap placed upon genius, efficiency, and skil These laws should be drafted as an industrial code prohibiting specifically the well-known devices by which one concern takes unfai advantage of another. A clear distinction should be made betwee industrial centralization, which brings together like concerns producing similar products by similar means for the purpose of controllin output and fixing prices, and the natural and orderly combination o enterprises which assembles under one control those corporation which, step by step and stage by stage, do their respective work i making a finished product out of raw material. In other words there may be a very efficient, useful, and harmless combination o corporations, each of which performs a portion of the whole labo necessary to perfect a manufactured article—such a combinatio would increase profits and cheapen the article to the consumer– while a combination of corporations engaged in the same work upo a like article or enterprise, though reducing somewhat the cost o production, would acquire a dangerous control of output and prices As to what these devices are the joint committee could ascertain b inquiry for the purposes of legislation. Some of them are well known From time to time as new devices for unfair competition or advantages should be developed, they should be added to the prohibition of the statute. We should save the field of interstate commerce as territory into which certain corporate concerns, after passing a prope examination, should be allowed to enter, and having entered the should be governed by a definite code of industrial regulation enacted by Congress. Gradually, by the careful study of industria development, by requiring elaborate reports, and by wise and jus control a system of rules governing interstate commerce could b developed and these rules would become familiar to every on engaged in it.

Instead of lodging the exclusive right to apply for and obtain a injunction in the hands of the Attorney General, it should be provide that any person whose property, estate, business, or enterprise i threatened with injury or damage in violation of any one of the prohibited acts, or in violation of the conditions on which the concer was admitted to the field of interstate commerce, could apply to an Federal court having territorial jurisdiction for an injunction t restrain the person or corporation threatening the injury. If a concern admitted to the field of interstate commerce should obey th rules and laws provided for its government in that field, and should b skill, efficiency, and energy grow to enormous size and earn ric rewards, I would count these rewards as the fruits of that industry, th harvest of energy and genius, and the crowning triumph of a civilization resting upon the doctrine of individualism.

62d Congress, 2d Session. } HOUSE OF REPRESENTATIVES. { Rept. 1127, Part 2.

INVESTIGATION OF UNITED STATES STEEL CORPORATION.

August 2, 1912.—Referred to the House Calendar and ordered to be printed as a separate document.

Mr. Gardner, from the Special Committee to Investigate Violations of the Antitrust Act of 1890, and other acts, submitted the following

VIEWS OF MINORITY.

SUMMARY—FINDINGS OF FACT.

That J. P. Morgan & Co. and the underwriting syndicate received $62,500,000 for organizing the United States Steel Corporation.

That the corporation was capitalized at $1,400,000,000, of which nearly one-half was "water."

That the average annual earnings of the corporation have been from 11 to 12 per cent on the actual value of its assets.

That the corporation controls a little over one-half the crude and finished steel business of the United States.

That the average wholesale price of steel products has fallen off since the corporation was organized.

That the corporation and all the independents have an understanding as to prices.

That the system of interlocking directorates has insidious consequences and facilitates "inside management" and the stifling of competition.

That the situation as to iron-ore supply is grave and may become menacing.

That labor conditions in certain departments of the steel industry are bad.

RECOMMENDATIONS.

1. *Constructive legislation.*—All corporations exceeding $50,000,000 in capitalization or valuation must become United States corpora-

tions before entering interstate commerce. For smaller corporati
United States charters are voluntary.

All United States corporations must be recapitalized at their act
value.

An Interstate Commission of Industry, like the Interstate Co
merce Commission, to be established. Publicity to be provided f

When the price fixed by a United States corporation has been fou
to be unreasonable, the Interstate Commission of Industry must p
licly declare that fact and recommend a reasonable price.

Interlocking directorates and "holding" companies forbidd
except when permitted by Interstate Commission of Industry.

If foregoing recommendations shall prove insufficient to meet t
trust problem, the Interstate Commission of Industry ought to
given a carefully guarded power to decree maximum prices wh
necessary.

2. *Palliative legislation.*—Industrial corporations not to own co
mon carriers.

"Unreasonable restraint of trade" defined and burden of proof
"reasonableness" transferred to the defendant.

Individuals and States to have the opportunity to intervene
Government suits.

Extensive powers and instructions for courts when combinatio
are adjudged illegal.

3. *Recommendation to the United States Steel Corporation.*—That
the blast furnaces and rolling mills three shifts of men, working
hours each, ought to take the place of two shifts of men working
hours each.

PART I.

FINDINGS OF FACT

We dispute the findings of fact of the majority without attempti
to deal specifically with their allegations. By singling out unus
incidents and unusual evidence, selecting unusual years, unus
prices, and unusual practices as a standard of comparison, the maj
ity has created an overdrawn picture portraying diabolical ingenui
and sinister malevolence as the characteristics of the United Sta
Steel Corporation officials.

J. P. MORGAN & CO.

The fact is that a very sharp line of discrimination ought to
drawn between the conduct of the banking house which promot
the United States Steel Corporation and the conduct of the exce
ingly competent, although perhaps not altruistic, managers who ha
subsequently made it a success.

In return for promotion services and risks the firm of J. P. Morgan & Co. exacted $62,500,000 in compensation for itself and the underwriting syndicate which it managed. Such a sum bore no relation whatever to the service rendered, the risk run, and the capital advanced. We do not hesitate to say that this transaction of J. P. Morgan & Co. must stand condemned before the more enlightened business ethics of later years.

HERBERT KNOX SMITH'S REPORT.

For statistical statements and for close analysis of figures, the minority mainly relies on the report of Herbert Knox Smith, until recently Commissioner of Corporations. We have examined each table prepared by the commissioner, and with slight variations we are convinced that his figures are correct. Only in the matter of our iron ore resources, as hereinafter noted, do we take serious issue with him.

CAPITALIZATION AND "WATER."

In substantial agreement with the commissioner, we find that the United States Steel Corporation was organized in April, 1901, with about $1,400,000,000 capital, of which approximately $600,000,000 to $700,000,000 was "water."

AVERAGE EARNINGS.

In substantial agreement with the commissioner, we find that the earnings of the corporation for the decade from 1901 to 1910, inclusive, averaged from 11 to 12 per cent annually, on the actual value of the property.

PROPORTION OF OUTPUT.

In substantial agreement with the commissioner, we find that in 1901 the Steel Corporation produced about 42½ per cent of the total output of pig iron of the United States. It produced about 43 per cent in 1910. In 1901, the Steel Corporation produced about 60 per cent of all the crude and finished steel output of the United States. By 1911, its percentage of that output had dropped to a little over 50 per cent.

WHOLESALE PRICES.

The Commissioner of Corporations has as yet published no findings as to the course of wholesale prices for steel products since the organization of the corporation in 1901.

For our facts in this division of the question, we rely on the figures giving in Hearings Nos. 6, 36, 52, and 63, on the annual reports of the American Iron & Steel Association, on the Iron Ore Manual, a on the Statistical Abstract of the United States.

We find that in the decade from 1901 to 1910, inclusive, the who sale price of eight representative steel products fell off from an av age of $38.80 per ton to an average of $36.11 per ton.

We subjoin a table of Pittsburgh wholesale prices for each year the decade.

Year.	Steel rails.	Ship plates, Pittsburgh.	Wire nails, Pittsburgh.	Steel bars, Pittsburgh.	Beams, Pittsburgh.	Tin-plate mill.	Bessemer iron, Pittsburgh.	Steel billets, Pittsburgh.	Avera
1910	28.00	32.60	40.09	32.03	32.92	80.64	17.19	25.39	3
1909	28.00	31.70	40.70	29.56	31.58	78.40	17.41	24.58	3
1908	28.00	36.84	44.35	33.15	36.73	82.88	17.07	26.31	3
1907	28.00	38.08	45.02	35.84	38.08	87.96	22.84	29.23	4
1906	28.00	35.84	41.56	35.39	38.08	88.56	19.54	27.41	3
1905	28.00	35.61	39.42	35.39	35.28	78.40	16.36	24.69	3
1904	28.00	34.52	40.32	29.56	34.49	76.38	13.76	22.08	3
1903	28.00	35.84	44.12	34.94	36.84	89.76	18.88	27.93	3
1902	28.00	35.84	44.57	37.40	35.38	88.03	20.15	30.32	3
1901	27.40	34.87	50.40	32.92	35.39	89.60	15.72	24.13	3

COALITIONS IN THE TRADE.

We find that there is a complete accord as to prices between t United States Steel Corporation and all the independents. In gener the United States Steel Corporation sets the prices and the indepen ents follow suit.

Although from time to time so-called "Gary" dinners have be held, we regard these functions as the gastronomic shadow of t price understandings rather than as their substance.

As a matter of common sense, it is obvious that in times of pr perity no "Gary" dinners are necessary to bring about uniformi of steel prices. When orders are satisfactory no independent, unle secretly, would lower prices for the purpose of getting more orde Obviously, the Steel Corporation could readily distance any ind pendent in a price-cutting race. It needs no interpreter to expla that situation to all concerned. It is equally plain that no indepen ent can raise prices so long as the corporation refuses to do so.

INTERLOCKING DIRECTORATES.

The system of interlocking directorates has insidious consequenc which no man can gauge. Yet we venture to say that the evil is n so great to-day as it was five years since. "Inside management" a term used to express a certain reprehensible practice which a fe years ago was all too prevalent in the business world. When administering the affairs of any corporation, the directors pursue policy more favorable to their own financial interests than to tho of the corporation which they are chosen to represent—to characteri such practices men use the expression, "inside management."

Interlocking directorates facilitate "inside management." Interlocking directorates often have been used for the purpose of stifling competition. Yet in many communities it is a distinct advantage not to limit the sphere of usefulness of any business man. We believe that interlocking directorates, like so many other human agencies, are fit subjects for regulation rather than for destruction. We doubt the wisdom of their absolute prohibition, unless regulation shall fail to abate the evil.

THE IRON-ORE SUPPLY.

The situation with regard to the iron-ore supply of this country is very serious. Since Herbert Knox Smith made his report, however, two changes for the better have occurred. The Steel Corporation has given notice of the cancellation of its lease of the Hill ore lands, containing approximately 250,000,000 tons of iron ore. Moreover, the most recent report of the Minnesota Tax Commission shows that the quantity of high-grade Lake Superior ore has hitherto been underestimated.

Commissioner of Corporations Smith found that the United States Steel Corporation by ownership or lease controlled about 75 per cent of the high-grade ores of the Lake Superior region. The estimate was made prior to the notice of cancellation of the Hill leases. The commissioner made no estimate of the corporation's proportional holding of southern ores.

Omitting the Hill ore lands, we find that the United States Steel Corporation owns or leases from 50 to 55 per cent of the Lake Superior high-grade ores and owns from 35 to 50 per cent of the ores in the Birmingham district.

This ore situation is grave to-day and in the future may become menacing. Who can doubt that the strength of its position as to ores will prove a potent lever, if used by the corporation, for the exclusion of future competitors from the field of steel making?

THE LABOR SITUATION.

The labor situation in certain manufacturing departments of the steel industry has always been bad, and to-day is bad. As a rule, in the plants of the corporation conditions are better than in the plants of the independents. In the rolling mills and blast furnaces, men often have been required to work, or at all events remain on more or less exacting duty, for 12 hours a day for 7 days in the week. Incredible as it may seem, the fact is indisputable. It is true that a blast furnace must be kept going night and day. If it is extinguished, it is ruined. We believe that the corporation is substantially improving this situation; but we can not forbear from uttering the suggestion that three shifts of 8 hours each ought to take the place of two shifts of 12 hours each. Although strictly speaking beyond the scope our report, we feel that this recommendation to the corporation n with propriety be made.

THE TENNESSEE COAL & IRON CO.

Without injecting into this report a political dispute about forr President Roosevelt, it is impossible adequately to discuss the abso tion of the Tennessee Coal & Iron Co. by the United States St Corporation. As the matter has but little practical bearing on serious issues of which we are treating, the minority will confine its to the general statement that its findings relative to the Tennes Coal & Iron Co. are not in accord with those of the majority.

Part II.

CONCLUSIONS.

We dispute the conclusions of the majority primarily because tl are based on the tenacious but antiquated assumption that the tı remedy for the evils of industrial combinations lies in their disso tion into greater or lesser subdivisions. Secondarily, we dispute t majority's conclusions in that they fail to suggest adequate mea for carrying out their own views. To advocate the present natio policy of dissolution while neglecting to suggest appropriate legis tion compelling it to be fundamental and thorough is to invite t recurrence of dissolutions unsatisfactory to the people.

TRUE REMEDY LIES IN FEDERAL CONTROL.

While we, the minority, are definitely of the opinion that the tı remedy for the trust problem lies in Federal control and in co pulsory Federal incorporation, with an unwatered recapitalizati nevertheless we are prepared to admit the possibility, or even pro ability, that the American people have by no means as yet come our conclusion.

ONE MORE TRY FOR OLD-FASHIONED COMPETITION.

On the assumption that the American people will insist on one mo attempt to restore the competition of bygone days, we sincer believe that they ought to demand a thorough revision and streng ening of the Sherman Act.

In case the Nation decides to continue the existing policy looki to the dissolution of the trusts, we recommend that instructions the Federal courts be so extended as to insure the thoroughness a completeness of these dissolutions.

Of the legislation proposed by the majority we have little unfavorable criticism to make other than of its inadequacy to meet the situation.

The Nation gasps for the permanent trade wind of constructive measures rather than for the summer zephyr of palliative devices.

However, the principles contained in the bills drafted by the majority are distinctly worthy of commendation, and we give them our approval. But if the policy of dissolution favored by the majority is to be pursued, much additional legislation is required before proper dissolution can be obtained. This legislation the majority has scarcely outlined.

CONSTRUCTIVE LEGISLATION.

If, on the other hand, as we hope, the country should be favorably impressed by the views of the minority, then a series of fundamental legislative changes must be adopted. To the far-reaching constructive measures which we advocate the legislation proposed by the majority may well be added as a desirable embellishment.

(1) We recommend that all corporations or combinations equaling in valuation or in capitalization the amount of $50,000,000, or such other sum as may be determined upon, shall be compelled to acquire an United States charter before engaging in interstate commerce. We recommend that voluntary Federal incorporation shall be provided for lesser organizations. The day has gone by when any niceties of historical policy should be permitted to blind us to the economic obliteration of State lines.

(2) We recommend the establishment of an Interstate Commission of Industry, which shall have control over all corporations operating under an United States charter. This control shall be similar to that which is exercised by the Interstate Commerce Commission over the railroad companies, and shall insure the requisite publicity.

(3) Whenever the price charged by an United States corporation for one of its products shall have been found to be unreasonable by some competent authority to be determined hereafter, we recommend that it shall be the duty of the Interstate Commission of Industry to make public declaration of the fact and to recommend a price in lieu of that found unreasonable.

(4) We recommend that all corporations when they acquire an United States charter shall be required to recapitalize at an amount not to exceed the true value of their assets. In the valuation of their assets, we recommend that nothing be reckoned for so-called "monopoly" value, or value which arises merely from their exclusive, majority, or substantial control of the industry in which they are engaged.

(5) We recommend that interlocking directorates in United Stat corporations shall be forbidden except when licensed by the Inte state Commission of Industry.

(6) We recommend that so-called "holding" companies shall l forbidden except when licensed for temporary purposes of reorgan zation by the Interstate Commission of Industry.

(7) Should the powers which we suggest prove insufficient t enable the Interstate Commission of Industry to exercise a salutar control over United States corporations, we recommend that furth legislation be enacted bestowing on the commission a carefull guarded power to fix a maximum price in lieu of any price adjudge to be unreasonable.

We, the minority, are fully alive to the fact that this recommend tion runs counter to the time-honored doctrines of the greate English-speaking political economists of the past. It even rur counter to much historical experience. Nevertheless, we are als aware that the great political economists of the past contemplate no situation such as now confronts us. In this twentieth centur combinations, international in their scope, have by their immens preponderance of power distorted the operation of general econom laws.

After the most serious deliberation, with a profound consciousne that this doctrine will offend many a deep student of public affair with a sincere hope that such a step may not prove necessary, neve theless it is our belief that we ought not to shrink from violating ou traditional policy if experience shall convince us that the trust prol lem can not otherwise be met.

PALLIATIVE LEGISLATION.

(8) We concur in the recommendation of the majority that indu trial corporations shall be forbidden to own common carriers.

(9) We also concur in the recommendation of the majority tha parties injuriously affected by combinations should have access t the courts and the benefit of adequate and sufficient remedies fo wrongs. Individuals or a State ought to have the opportunity t intervene in a Government suit.

(10) We also concur in the view of the majority that the legal e pression "unreasonable restraint of trade" must be defined, tha certain obnoxious practices shall be held to be conclusive eviden of "unreasonableness," that in certain other cases the burden proof of "reasonableness" must rest with the defendant, and tha the courts shall have extensive powers when combinations are a judged illegal. The majority presents a bill covering these question When redrafted so as to attain the ends which it seeks to accomplis we give it our approval, except as regards section 14. Section 1

seeks to create a rebuttable presumption of "unreasonableness" in cases where a combination controls 30 per cent of the domestic trade in a given article. It may perhaps be true that this bill defines as "unreasonable" a number of acts which the common law already interdicts; but it is as well to crystallize these definitions into the form of a statute.

EXTRANEOUS LEGISLATION.

(11) As to the recommendation of the majority to the effect that the Commissioner of Corporations should be required to report to Congress as well as to the President, we forbear to express an opinion until we have had an opportunity to hear the question adequately discussed.

Augustus P. Gardner.
Henry G. Danforth.

I concur in the above report except that I believe that the Interstate Commerce Commission and the railroad commissions of the several States are clothed with sufficient power to remedy all evils growing out of the ownership of common carriers by industrial corporations. To forbid such ownership would tend to decrease economy and efficiency on the part of the industrials. Furthermore, I am not convinced that the power to fix prices is necessary to the efficiency of Federal control. Should experience, however, demonstrate that I am wrong in this conclusion I should unhesitatingly favor the granting of such power.

H. O. Young.

○

62d Congress, 2d Session. } HOUSE OF REPRESENTATIVES. { Rept. 1127, Part 3.

INVESTIGATION OF UNITED STATES STEEL COPORATION.

August 2, 1912.—Referred to the House Calendar and ordered to be printed.

Mr. Young, from the Special Committee to Investigate Violations of the Antitrust Act of 1890, and other acts, submitted the following

VIEWS OF THE MINORITY.

SUPPLEMENTARY REPORT ON THE FACTS BY H. O. YOUNG, A MEMBER OF THE SPECIAL COMMITTEE TO INVESTIGATE THE UNITED STATES STEEL CORPORATION.

I have joined with my Republican colleagues upon the United States Steel Committee in their report and recommendations, except that I do not agree with them that it is necessary to prohibit industrial corporations, under all circumstances, from owning common carriers, nor that it is advisable or necessary to invest the Federal agency to be intrusted with the supervision and control of large corporations engaged in interstate commerce with the power to fix prices.

Under ordinary circumstances I should content myself with such action, but the majority of the committee have united in a report of some 200 pages. A very large proportion of this report purports to be a statement of the facts elicited by the investigation of the committee. This statement is so overdrawn, prejudiced, inaccurate, and exaggerated that I feel it ought not to go unanswered.

It is true that the report of the Republican members of the committee, signed by me, does in a general way deny emphatically many of the misrepresentations of the majority report, but I feel that it is necessary in order that a correct picture of the situation may be given to go further than this; hence this supplementary report.

The special committee to investigate violations of the antitrust act, usually known as the Steel Corporation Committee, was appointed under the authority of House Resolution No. 148 of the present Congress. That resolution is as follows:

> *Resolved,* That a committee of nine Members, to be elected by the House, be, and is hereby, directed, to make an investi-

> gation for the purpose of ascertaining whether there have occu red violations by the United States Steel Corporation, or othe corporations or persons as hereinafter set out, of the antitrus act of July second, eighteen hundred and ninety, and the act supplementary thereto, the various interstate-commerce act and the acts relative to the national-banking associations, whic violations have not been prosecuted by the executive officers o the Government; and if any such violations are disclosed sai committee is directed to report the facts and circumstances t the House.
>
> Said committee is also directed to investigate the United State Steel Corporation, its organization and operation, and if in connection therewith violations of law as aforesaid are disclosed, t report the same.
>
> Said committee shall inquire whether said Steel Corporatio has any relations or affiliations in violation of law with the Pennsylvania Steel Company, the Cambria Steel Company, the Lackawanna Steel Company, or any other iron or steel company.
>
> Also whether said Steel Corporation through the persons owning its stock, its officers or agents, has or has had any relation with the Pennsylvania Railroad Company, or any other railroa company, or any coal companies, national-banking companies trust companies, insurance companies, or other corporate organizations or companies, or with the stockholders, directors, or othe officers or agents of said companies, or with any person or persons which have caused or have a tendency to cause any of the result following:
>
> First. The restriction or destruction of competition in production, sale, or transportation.
>
> Second. Excessive capitalization and bonding of corporations
>
> Third. Combinations created by ownership or control by on corporation or the stockholders or bondholders thereof of th stock or bonds of other corporations, or combinations betwee the officers or agents of one corporation and the officers or agent of other corporations by duplication of directors or other mean and devices.
>
> Fourth. Speculations in stocks and bonds by agreement amon officers and agents of corporations to depress the value of th stocks and bonds of other corporations for the purpose of acquiring or controlling same.
>
> Fifth. Profits through such speculation to officers or agent of such corporations to the detriment of the stockholders and th public.
>
> Sixth. Panics in the bond, stock, and money markets.
>
> Said committee shall in its report recommend such furthe legislation by Congress as in its opinion is desirable.
>
> Said committee as a whole or by subcommittee is authorize to sit during sessions of the House and the recess of Congress, t employ clerical and other assistance, to compel the attendanc of witnesses, to send for persons and papers, and to administe oaths to witnesses.
>
> The Speaker shall have authority to sign and the Clerk t attest subpœnas during the recess of Congress.

After the committee had proceeded some time with its investigatio the Department of Justice brought a proceeding against the Unite

States Steel Corporation, charging it with violations of the antitrust act and praying for its dissolution. After the commencement of this suit the United States Steel Corporation, through its attorneys, appeared before the committee and protested against the further continuance of the investigation on the ground that the whole matter was involved in the suit begun by the Government. The committee, at a meeting held on December 11, 1911, by a unanimous vote took the action set out in the following extract from its proceedings:

> The committee has had under careful consideration the objections made by the United States Steel Corporation, through its counsel, to the further prosecution of this investigation. The resolution under which this committee is proceeding directs the committee:
>
> First. To inquire into and report as to whether the United States Steel Corporation is in its organization or operations acting in violation of the antitrust law.
>
> Second. To inquire into and report violations of the interstate-commerce acts and amendments thereto and to the acts relating to national banking associations.
>
> Third. To inquire into the restriction or destruction of competition by reason of the relations of the United States Steel Corporation and its officers with other companies.
>
> Fourth. The excessive capitalization and bonding of corporations.
>
> Fifth. Combinations created by holding companies, interlocking directorates, and other devices.
>
> Sixth. Combinations to depress the value of stocks and bonds for the purpose of acquiring them.
>
> Seventh. Panics in the bond and stock market.
>
> And the committee is also directed to recommend such further legislation by Congress as, in its opinion, is desirable.
>
> The objection made by the counsel for the Steel Corporation to the further continuance of the investigation was based upon the ground that the Government had filed a bill in the courts of New Jersey against the United States Steel Corporation seeking its dissolution under the antitrust law. As to this objection, it is our unanimous opinion that the committee should continue the investigation as if no proceeding on the part of the United States Government were now pending against said corporation, but not for the purpose of determining the questions involved in the action brought by the Government against the United States Steel Corporation, and any inquiry into the subjects embraced in that action should be made for the purpose of enabling the committee to recommend such further legislation as in its opinion is desirable. Touching all other matters the committee will proceed as heretofore.

The committee's authority to investigate violations of the law was confined to such as had not been prosecuted by the executive officers of the Government. Of course, speaking with technical accuracy, the resolution excluded from the investigation only such violations as had been prosecuted by the Government at the time the resolution passed. But in substance and in reason it excluded from the invest gation the violations, or alleged violations, dealt with in the su begun after the committee had entered upon its deliberations. Th committee so far coincided with this view as to declare that an investigations they might make into the subjects embraced in th suit of the Government should not be for the purpose of determinin the questions involved in that action, but only for the purpose enabling the committee to recommend such further legislation as deemed desirable. We believed that this action of the committee wa proper, and that it precludes the committee from any finding as whether the matters involved in the suit by the Government const tuted or do not constitute a violation of the law. The impropriety a committee of Congress, which speaks with some authority, an which would naturally to some extent influence public opinion, decla ing, during the pendency of a suit, as its solemn judgment that th defendants were, or were not, guilty of the acts of wrongdoin charged in the Government's complaint, I am confident must appe to the sound judgment of every lawyer and to the good sense of ever judicious and fair-minded man. Therefore so far as the matte involved in the suit of the Government are concerned I shall confin myself to a statement of the facts as they appear from the eviden taken by the committee without drawing any conclusion as to wheth they do or do not constitute violations of the law. I shall begin, ther fore, with that portion of the resolution which directs the committe to investigate the organization and operation of the United State Steel Corporation.

If I should attempt to point out in detail all of the inaccuracie exaggerations, and misrepresentations in the report of the majority would draw this report out to a length which would tax my enduran and prevent its being read by anyone. I shall therefore adopt th course of calling attention to a very few of the distortions and mi statements in that report and then present a statement of what I co ceive to be the real facts in the case upon which the committee we required to report.

The majority report contains the following quotation from som testimony given by Judge Gary before the Ways and Means Con mittee relative to the United States Steel Corporation:

> Mr. COCHRAN. Of this whole sum, $1,782,000,000, was not or billion, at least, capitalized profits as distinguished from origin investment?
>
> Mr. GARY. I should have to guess at that, but I should gue yes, including increase in value.

This statement is perfectly clear that both Mr. Cochran and M Gary had in their minds the distinction between original investmen and the surplus profits made in the business which were later capita ized.

But later the majority of the committee, in referring to this statement of Judge Gary, transmutes it into the following:

> Judge Gary before the Ways and Means Committee guesses that a billion dollars of this capitalization of the United States Steel Corporation was *water*. His guess is approximately correct.

And again it is stated, referring to the same matter, "when it is remembered that the 'concern' at its organization was already bonded for $303,450,000 more than the actual value of its property," etc.

Later in the report the statement is again repeated that the actual value of the United States Steel Corporation was less than $300,000,000.

There is absolutely no testimony in the record upon which to found this statement. The United States Steel Corporation was heavily overcapitalized, as will be shown later on, but the very least physical value placed by anyone upon its properties, at the time of its organization, is $676,000,000. (Herbert Knox Smith Rept., pt. 1, pp. 15, 19, and 36.)

At another part of the report the statement is made that the United States Steel Corporation acquired a one-third interest in the Negaunee mine for $500,000. This statement is made for the purpose of showing the value of mining properties and is based upon a statement in McRae's report, page 3789, that the United States Steel Corporation negotiated for the purchase of this property at that price. As a matter of fact it never acquired this interest in it, and the property was subsequently leased to other parties, who paid a bonus of $1,500,000 for a lease upon a 30-cent royalty.

The majority in an argument intended to prove that the properties purchased by the United States Steel Corporation of the Union Iron Co., which had lately absorbed the Sharon Steel Co., were purchased to eliminate competition urges that the extravagant price paid for that property is only proof of their conclusion. They state that the price was $75,860,501, and compared it with the value of seven other steel companies to show its extravagance. As a matter of fact the price paid, instead of $75,860,501, was $33,202,490, and this included liquid assets of $2,341,989, leaving the amount actually paid for the property $30,860,501. This error is the more astonishing as the contract under which this property was acquired is set forth in full in the McRae Report, beginning on page 4348, and the transaction is fully explained in Herbert Knox Smith Report, part 1, on page 283.

This transaction in brief was as follows:

The Union Steel Co. was not fully organized at the time of its purchase and the contract of the United States Steel Corporation was made not with the Union Steel Co., but with its owners. The entire capital stock of this company was transferred to the United States

Steel Corporation, and the United States Steel Corporation in co
sideration therefor guaranteed $45,000,000, par value, of bon
authorized by the Union Steel Co. These bonds had not bee
issued but were used as follows: $33,202,490, par value, of the
were issued to the owners of the Union Steel Co. in full payment f
the property. The remainder of the $45,000,000 were retained b
the Union Steel Co., which by the transfer of its stock became t
property of the United States Steel Corporation, to be issued t
acquire a working capital. It appears that a considerable porti
of them never were issued. Just how the majority arrived at the
findings I am unable to comprehend, but that they are absolutel
without any foundation in fact is patent.

Again,

In reference to the purchase of the Tennessee Coal, Iron & Rai
road Co., and the action of President Roosevelt therein. The lett
of President Roosevelt, dated November 4, 1907, addressed t
Attorney General Bonaparte, is set forth in full. Commenting upo
this the report of the majority says among other things, "th
letter contains the following alleged statements of fact"—and I wi
confine myself to the first of these:

> 1. A certain business firm of real importance in New Yor
> having among its assets a majority of the stock of the Tenness
> Coal, Iron & Railroad Co., was about to fail if help was not fort
> coming from the Steel Corporation. * * * Such were t
> representations made by Messrs. Frick and Gary to the Preside
> of the United States during this brief 20 minutes' interview. T
> same number of palpably incorrect statements were probabl
> never couched in the same number of words before or since. A
> to the existence of this unknown business of great importan
> which was alleged to have had a majority of the assets of t
> Tennessee Coal, Iron & Railroad Co., there was no concern i
> the city of New York of any importance which had among i
> assets a majority of the stock of the Tennessee Coal, Iron & Rai
> road Co. or which would in any way have been affected by t
> exchange of such stock as it did have for any other stock. T
> President was evidently laboring under the impression that so
> great financial institution burdened with its load of Tenness
> Coal, Iron & Railroad Co. securities was tottering to its rui
> and about to smash up other concerns by its fall.
>
> Now, the evidence before this committee shows that the m
> jority of this stock was locked up in the strong boxes of Ogleb
> Hanna, Gates, and others, no one of whom was in any wa
> involved.

Anyone who charges another with falsification should themselv
at least take ordinary pains to be correct. It appears from all of t
testimony that the firm in question was Moore & Schley, banke
and brokers; that they were worth about $10,000,000 and had li
bilities of about $38,000,000, while approximately the same amou
was owing to them. To the ordinary man it would seem clear that

concern with this capital and credit was one "of real importance in New York business circles."

Now then, did it have among its assets a majority of the securities of the Tennessee Coal, Iron & Railroad Co.? The capitalization of the latter company was 294,000 shares, approximately. (Schley, hearings, p. 1049.)

In regard to the amount held by Moore & Schley, Mr. Schley testified as follows:

> Mr. LITTLETON. How much do you think at that time of the stock of the Tennessee Coal & Iron Co. Moore & Schley had loaned money on to their customers and had in turn hypothecated with their other securities in making loans for themselves?
>
> Mr. SCHLEY. I could only estimate that.
>
> Mr. LITTLETON. Well, give us the best estimate you can.
>
> Mr. SCHLEY. I should say we had approximately 150,000 shares.
>
> Mr. LITTLETON. One hundred and fifty thousand shares?
>
> Mr. SCHLEY. One hundred and forty thousand or one hundred and fifty thousand shares on our books subject to loan.
>
> Mr. LITTLETON. You say "subject to loan," and those short phrases sometimes we do not understand.
>
> Mr. SCHLEY. Well, upon which stock our customers were borrowing money.

Again Mr. Littleton returned to the subject and the following colloquy occurred:

> Mr. LITTLETON. It says here, "among its assets are a majority of the securities of the Tennessee Coal Co." Were the assets of Moore & Schley, or did they contain, a majority of the Tennessee Coal Co.'s stock? I mean Moore & Schley assets.
>
> Mr. SCHLEY. I should not think so; but it approximated it.
>
> Mr. LITTLETON. Moore & Schley, as a matter of fact, did not have among their assets a majority of the stock of the Tennessee Coal Co., did they?
>
> Mr. SCHLEY. It approximated it. (Hearings, pp. 1095, 1096.)

It will be noted that Mr. Littleton specifically confined his question to the assets of Moore & Schley alone and got the final answer that those holdings approximated a majority of the stock of the Tennessee Coal, Iron & Railroad Co.

This testimony is sufficient to show that the statement that Moore & Schley were a financial concern of importance in New York and that they had among their assets a majority of the stock of the Tennessee Coal, Iron & Railroad Co. was at least substantially correct.

But the majority report says further that no concern of importance in the city of New York would have in any way been affected by the exchange of said stock; but Mr. Schley swears that the situation of Moore & Schley previous to the sale of Tennessee Coal, Iron & Railroad Co. was as if "a sword was suspended over their head; it might sever it at any moment." (Schley, hearings, p. 1110.)

And, speaking of the effect of the sale upon the affairs of Moore Schley, he says "that it put $12,000,000 into their coffers." He add

> The effect was enormous, Mr. Littleton. When you reduc $35,000,000 of loans by $12,000,000, bringing it down to $23,000 000, you are bringing into your boxes 30 or 35 per cent, or wha ever the margin was you had up, of new material to bring int your box and sell it. Thirty per cent of $12,000,000 $3,600,000. That strengthens you, and your loans are les and Moore & Schley were $5,000,000 richer, with much les loans and within 35 days impregnable. (Schley, Hearing p. 1089.)

In view of this testimony, which is uncontradicted, what can th majority mean in their report when they state that there was no cor cern in the city of New York of any importance which would in an way have been affected by the exchange of such stock? But this not all. The majority in the portion of the report already quote say that the evidence shows that the majority of this stock was locke up in the strong boxes of Ogleby, Hanna, Gates, and others, intenc ing to have it understood, of course, that if it was in the possession c these gentlemen it could not have been in Moore & Schley's posses sion. But the evidence shows nothing of this kind. It account for less than 100,000 shares of the Tennessee Coal, Iron & Railroad Cc stock as not being in the hands of Moore & Schley, and as to th remainder, if any, which was not in their hands the record is utterl silent.

It must not be thought that the above instances of inaccurac unfairness and misrepresentation are isolated cases; they are merel typical cases with which nearly every page of the report bristles.

Now, having called attention to the fact that the report of th majority, as presented to the members of the minority membei of the committee, can not be relied on as to its statement of facts and that one who wishes to know the facts when examining tha report must constantly refer to the record, I will proceed with a state ment of what I consider to be the facts disclosed by the testimon before the committee. Doubtless some errors will creep into m statement, but they will be unintentional, and I shall be glad t have them pointed out.

The organization of that great corporation was only the last ste in the evolution of the iron and steel industry in this country. I was not a sudden birth, but, on the contrary, was the outgrowth c a slow and steady development and grew out of the conditions sur rounding the industry. In order to understand the causes that le to the promotion of this great corporation, it is necessary to reca briefly the previous history of the industry. From very humbl beginnings it has grown to gigantic proportions.

Until about 1867 the manufacture of steel was insignificant. The industry was confined almost entirely to iron. The history of the iron industry divided itself naturally into two periods, the first extending from the beginning until about the year 1840. During this period charcoal was the only fuel. During the second period, which begins about 1840, the industry was based upon anthracite and bituminous coal as a fuel. This change in fuel constituted almost a revolution in the business and extended it by leaps and bounds.

THE CHARCOAL PERIOD.

During the charcoal period facilities for transportation were small and the ability of the people to buy was slight, so the business was necessarily conducted in small plants, cheaply built and having only a local custom.

The first iron furnace in this country of which we have any authentic record was built at Lynn, Mass., in 1645. In the century following a large number of small furnaces and bloomeries were erected and operated in New England, using bog ores almost exclusively. In 1734 the richer brown ores of western Connecticut and southern New York were obtained and largely replaced the bog ores.

After the close of the Revolution the iron industry expanded rapidly, following the western progress of settlement, and had reached western Pennsylvania and the Appalachian Valley of Virginia and Tennessee before the close of the eighteenth century. In the first 40 years of the nineteenth century it had reached as far west as Missouri and north to Michigan.

In 1810 the entire pig-iron production of this country was 53,908 tons, or a little less than 19 pounds to each inhabitant of the country. In 1840 this production had grown to 286,903 tons, or about 37 pounds for each inhabitant.. This product was made in 804 blast furnaces, making an average of 356 tons per annum from each furnace. (Hearings, pp. 3577, 3578; Encyclopædia Americana, vol. 9.)

THE ANTHRACITE AND BITUMINOUS PERIOD.

David Thomas erected the first furnace for the making of anthracite pig iron at Catasauqua, Pa. It was blown in July 3, 1840, and made an average of 50 tons of metal a week. In 1846 the first bituminous furnace was constructed at Lowell, Mahoning County, Ohio.

The substitution of anthracite and bituminous coal for charcoal, as has been said, worked a revolution in the iron business. The capacity of the furnaces was greatly increased. With improvement in transportation facilities, the industry was concentrated at fewer points, which were advantageously located with reference to the fuel supply. The ore was brought to the fuel, hence only the best ore and the largest deposits were worked, for none other would stand t cost of transportation.

The change was marked by a rapid increase in the amount of pı duction and the concentration of the business at points favorak located for obtaining cheap coal. The production of pig iron in 18 had increased to 821,223 tons, or about 59 pounds per inhabitaı This compares with a production in Great Britain, for the same ye of 3,826,752 tons.

Of the amount produced in this country, 552,560 tons was man factured in the State of Pennsylvania and all but about 100,000 to in the States of New York, Pennsylvania, New Jersey, Marylar and Ohio, combined.

The rapid increase in the iron business, as well as its tendency concentrate at fewer places and in fewer hands, is well illustrat by the fact that while in 1840 there were 804 furnaces in this countı manufacturing a total product of 286,903 tons, or about 37 poun for each inhabitant and about 357 tons per annum for each furna in 1870 the product had increased to 1,665,179 tons, or an average 98 pounds per inhabitant, and this product was produced in or 386 establishments, producing an average of 4,314 tons each ı annum, or about twelve times the average product per establis ment of 1840. (Encyclopædia Americana, vol. 9; hearings, pp. 35 3577, 3590; Report American Iron & Steel Association, 1905, p. 1 Comp. Ninth Census, pp. 8, 909.)

LAKE SUPERIOR ORES.

During this period occurred the discovery of iron ore near La Superior, which was destined to exert a marked influence on the ir and steel industry of this country. The first shipment from tl district occurred in 1855, immediately after the opening of the fi canal through the rapids in the St. Marys River, opposite Sault S Marie, Mich. The shipment was from the Cleveland-Cliffs iron mi at Ishpeming, Mich. It amounted to 1,449 tons, and was sold Cleveland, Ohio, at $10 per ton.

In 1860 the shipments from this district had increased to 114,4 tons and in 1870 to 830,940 tons. This compares with a total pı duction of iron ore in the Uinted States for the same years, resp tively, of 2,873,460 tons and 3,813,891 tons. (Mineral Resources Lake Superior, by A. P. Swineford, p. 152; hearings, pp. 3462, 34 3490, 3498.)

The following tables will show the rapid increase in the consumpti of ore, the source whence it is now drawn, and the growing imp tance of the Lake Superior field:

Yearly tonnage shipments of iron ore from each range of the Lake Superior district.

[Since the opening of the lock and canal at Sault Ste. Marie in 1855. Reprinted from the Iron Trade Review.]

Year.	Marquette.	Menominee.	Gogebic.	Vermilion.	Mesaba.	Grand total.
1855	1,449					1,449
1856	36,343					36,343
1857	25,646					25,646
1858	15,876					15,876
1859	68,832					68,832
1860	114,401					114,401
1861	49,909					49,909
1862	124,169					124,169
1863	203,055					203,055
1864	243,127					243,127
1865	236,208					236,208
1866	278,796					278,796
1867	473,567					473,567
1868	491,449					491,449
1869	617,444					617,444
1870	830,940					830,940
1871	779,607					779,607
1872	900,901					900,901
1873	1,162,458					1,162,458
1874	919,557					919,557
1875	891,257					891,257
1876	992,764					992,764
1877	1,010,494	4,593				1,015,087
1878	1,033,082	78,028				1,111,110
1879	1,130,019	245,672				1,375,691
1880	1,384,010	524,735				1,908,745
1881	1,579,834	727,171				2,307,005
1882	1,829,394	1,136,018				2,965,412
1883	1,305,425	1,047,415				2,352,840
1884	1,548,034	895,634	1,022	62,124		2,506,814
1885	1,480,422	690,435	119,860	225,484		2,516,201
1886	1,627,383	880,006	747,589	304,396		3,559,374
1887	1,851,414	1,193,343	1,303,267	394,252		4,742,276
1888	1,918,750	1,191,101	1,424,699	511,953		5,046,503
1889	2,634,816	1,796,755	2,016,391	844,682		7,292,644
1890	2,993,664	2,282,237	2,847,786	880,114		9,003,801
1891	2,512,242	1,824,619	1,839,574	894,618		7,071,053
1892	2,665,169	2,261,499	2,971,991	1,167,650	4,245	9,070,554
1893	1,835,893	1,466,197	1,329,385	820,621	613,620	6,065,716
1894	2,060,260	1,137,949	1,809,468	948,513	1,793,052	7,749,242
1895	2,097,838	1,923,798	2,547,976	1,077,838	2,781,587	10,429,037
1896	2,604,221	1,560,467	1,799,971	1,088,090	2,882,079	9,934,828
1897	2,715,035	1,937,013	2,258,236	1,278,481	4,275,809	12,464,574
1898	3,125,039	2,522,265	2,498,461	1,265,142	4,613,766	14,024,673
1899	3,757,010	3,301,052	2,795,856	1,771,502	6,626,384	18,251,804
1900	3,457,522	3,261,221	2,875,295	1,655,820	7,809,535	19,059,393
1901	3,245,346	3,619,053	2,938,155	1,786,063	9,004,890	20,593,507
1902	3,868,025	4,612,509	3,654,929	2,084,263	13,342,840	27,562,566
1903	3,040,245	3,749,567	2,912,708	1,676,699	12,892,542	24,271,761
1904	2,843,703	3,074,848	2,398.287	1,282,513	12,156,008	21,755,359
1905	4,215,572	4,495,451	3,705,207	1,677,186	20,158,699	34,252,115
1906	4,057,187	5,109,088	3,643,514	1,792,355	23,819,029	38,421,173
1907	4,388,073	4,964,728	3,637,102	1,685,267	27,495,708	42,170,878
1908	2,414,632	2,679,156	2,699,856	841,544	17,257,350	25,892,538
1909	4,256,172	4,875,385	4,088,057	1,108,215	28,176,281	42,504,110
1910	4,392,726	4,237,738	4,315,314	1,203,177	29,201,760	43,350,715
1911						32,130,411
Total	96,336,406	75,306,746	65,179,956	30,328,562	224,905,184	492,056,854
To adjust	−39,689	+144,047	−44,139			+60,219
Barraboo						972,309
Total	96,296,717	75,450,793	65,135,817	30,328,562	224,905,184	493,089,382

Production of iron ore in the United States, 1860–1910, in long tons.

Year.	Hematite.	Brown ore.	Magnetite.	Carbonate.	Total
1860					2,873,
1870					3,831,
1875					4,017,
1880	2,243,993	1,918,622	2,134,276	823,471	7,120,
1881					7,119,
1882					8,700,
1883					8,800,
1884					7,718,
1885					7,600,
1886					10,000,
1887					11,300,
1888					12,062,
1889	9,056,288	2,523,087	2,506,415	432,251	14,518,
1890	10,527,650	2,559,938	2,570,838	377,617	16,036,
1891	9,327,398	2,757,564	2,317,108	189,108	14,591,
1892	11,646,619	2,485,101	1,971,965	192,981	16,296,
1893	8,272,637	1,849,272	1,330,886	134,834	11,587,
1894	9,347,434	1,472,748	972,219	87,278	11,879,
1895	12,513,995	2,102,358	1,268,222	73,039	15,957,
1896	12,576,288	2,126,212	1,211,526	91,423	16,005,
1897	14,413,318	1,961,954	1,059,479	83,295	17,518,
1898	16,150,684	1,989,681	1,237,978	55,373	19,433,
1899	20,004,399	2,869,785	1,727,430	81,559	24,683,
1900	22,708,274	3,231,089	1,537,551	76,247	27,553,
1901	24,006,025	3,016,715	1,813,076	51,663	28,887,
1902	30,532,149	3,305,484	1,688,860	27,642	35,554,
1903	30,328,654	3,080,399	1,575,422	34,833	35,019,
1904	23,839,477	2,146,795	1,638,846	19,212	27,644,
1905	37,567,055	2,546,662	2,390,417	21,999	42,526,
1906	42,481,375	2,781,063	2,469,294	17,996	47,749,
1907	46,060,486	2,957,477	2,679,067	23,589	51,720,
1908	31,788,564	2,561,825	1,547,797	26,586	35,924,
1909	46,208,640	2,700,431	2,229,839	16,527	51,155,
1910	51,367,007	2,868,572	2,631,835	22,320	56,889,

Quantity and value of iron ore produced in the United States, 1909 and 1910, by Stat

State.	1909		1910		Increase (+) or decrease (−) in 1910.		Percentage increase (+) decrease (−) 1910.	
	Quantity, in long tons.	Value.	Quantity, in long tons.	Value.	Quantity, in long tons.	Value.	Quantity.	Val
Alabama	4,321,252	$4,996,455	4,801,275	$6,083,722	+ 480,023	+$1,087,267	+ 11.11	+ 21
California, Colorado, New Mexico, Washington, and Wyoming	637,582	646,082	861,850	877,223	+ 224,268	+ 231,141	+ 35.17	+ 35
Connecticut and Massachusetts	38,272	141,274	34,158	121,306	− 4,114	− 19,968	− 10.75	− 14
Georgia	221,016	332,478	313,878	482,659	+ 92,862	+ 150,181	+ 42.02	+ 45
Kentucky and West Virginia	74,769	110,287	64,347	86,085	− 10,422	− 24,202	− 13.94	− 21
Maryland	23,888	46,786	14,062	29,105	− 9,826	− 17,681	− 41.13	− 37
Michigan	11,900,384	32,282,622	13,303,906	41,393,585	+1,403,522	+ 9,110,963	+ 11.79	+ 28
Minnesota	28,975,149	60,253,314	31,966,769	78,462,560	+2,991,620	+18,209,246	+ 10.32	+ 30
Missouri	89,954	210,853	78,341	168,697	− 11,613	− 42,156	− 12.91	− 19
New Jersey	543,720	1,607,003	521,832	1,582,213	− 21,888	− 24,790	− 4.03	− 1
New York	1,015,333	3,072,323	1,287,209	3,848,683	+ 271,876	+ 776,360	+ 26.78	+ 25
North Carolina	61,150	107,013	65,278	114,237	+ 4,128	+ 7,224	+ 6.75	+ 6
Ohio	16,527	28,547	22,320	35,866	+ 5,793	+ 7,319	+ 35.05	+ 25
Pennsylvania	666,889	792,672	739,799	911,847	+ 72,910	+ 119,175	+ 10.93	+ 15
Tennessee	657,795	907,282	732,247	1,048,323	+ 74,452	+ 141,041	+ 11.32	+ 15
Texas	6,474	9,318	29,535	34,003	+ 23,061	+ 24,685	+356.20	+264
Virginia	837,847	1,693,188	903,377	1,845,144	+ 65,530	+ 151,956	+ 7.82	+ 8
Wisconsin	1,067,436	2,727,406	1,149,551	3,610,349	+ 82,115	+ 882,943	+ 7.69	+ 32
Total	51,155,437	109,964,903	56,889,734	140,735,607	+5,734,297	+30,770,704	+ 11.21	+ 27

STEEL.

The first steel known to have been produced in this country was made in Connecticut in 1728 by Samuel Highley and Joseph Dewey. Crucible steel was first successfully produced in the United States in 1832 at the works of William and John H. Carrard, at Cincinnati, Ohio. But this industry was insignificant, and in 1860 the production in this country had only reached 11,838 tons.

In 1856 came the great invention of Sir Henry Bessemer. But this process was not perfected until a number of years later. Bessemer steel was first made in this country in September, 1864, by William F. Durfee at an experimental plant at Wyandotte, Mich., and the first Bessemer steel rails made in America were rolled at the North Chicago Rolling Mill, in the presence of the American Iron and Steel Institute, in May, 1865, from ingots made at Wyandotte, Mich.

Open-hearth steel was first made in 1864 in this country by the New Jersey Steel & Iron Co. at Trenton, N. J.

The first plant for the manufacture of Bessemer steel in this country in commercial quantities was erected by the Pennsylvania Steel. Co. at Steelton, Pa., near Harrisburg, Pa., and was put in operation in June, 1867.

The first Bessemer steel rails made in eastern United States were rolled by the Cambria Iron Co. at Johnstown, Pa., in August, 1867, from ingots made by the Pennsylvania Steel Co. in its plant at Steelton, Pa. The total product for that year was 3,000 tons.

The Siemens-Martins process for making open-hearth steel was introduced into the United States in 1868 by F. J. Slade for Cooper, Hewitt & Co. at the works of the New Jersey Iron & Steel Co. at Trenton, N. J.

The basic open-hearth process was introduced in this country in 1880 by Carnegie, Phipps & Co., at Homestead, Pa. (Hearings, p. 3510; Ency. Brit., vol. 14, p. 804, 11th ed.; "Iron and Steel Industry," Ency. Am., vol. 9.)

The rapid growth of the steel industry throughout the world and the steady forging to the front of this country therein, until it had passed all its rivals, is well illustrated by the table following (taken from the Ency. Brit., vol. 14, p. 834, 11th ed.).

Production of steel in thousands of long tons.

		Bessemer.	Open hearth.	Crucible and miscellaneous.	Total
1870.					
United States		37	1	31	
Great Britain		215	78		2
The world					6
1880.					
United States		1,074	101	72	1,2
Great Britain		1,044	251	80	1,3
Germany and Luxemburg		608	87	33	7
The world					4,2
1890.					
United States		3,689	513	75	4,2
Great Britain		2,015	1,564	100	3,6
Germany and Luxemburg					2,1
The world					11,9
1900.					
United States	acid	6,685	853	105	10,1
	basic		2,545		
Great Britain	acid	1,254	3,156	149	5,0
	basic	491			
Germany and Luxemburg					6,5
The world					28,2
1907.					
United States	acid	11,668	1,270	145	23,3
	basic		10,279		
Great Britain	acid	1,280	3,385		6,5
	basic	579	1,279		
Germany and Luxemburg	acid	381	209	208	11,8
	basic	7,098	3,976		
The world					50,3

The following table illustrates the same movement in this industr It is taken from the Abstract of the Twelfth Census, page 311, an covers the entire industry of manufacturing iron and steel in th country.

Comparative summary, by specified industries, 1900, 1890, 1880.

Year.	Number of establishments.	Capital.	Iron and steel.			Value of products, including custom work and repairing.
			Wage earners.		Cost of materials used.	
			Average number.	Total wages.		
1900	668	$573,391,663	222,490	$120,820,276	$522,389,932	$803,968,2
1890	645	372,678,018	148,715	78,977,900	295,777,843	430,954,3
1880	1,005	230,971,884	140,978	55,476,785	191,271,150	296,557,6

It will be noticed that while in 1880 there were 1,005 establishmen in the business, in 1900 these had decreased to 668, while the capit invested had increased from a little over 230 millions to over 57 millions of dollars. The employees had increased from 140 thousan to 222 thousand. Their total wages had increased from 55 millio to 120 millions of dollars; the cost of material from 191 millions t

522 millions of dollars; and the value of the product from 296 millions to 803 millions of dollars.

It will be readily seen, from the facts already given, that immediately upon the beginning of the use of anthracite and bituminous coal as a fuel the process of rapid growth and concentration in fewer places and fewer hands began. This movement was greatly accelerated by the discovery of Sir Henry Bessemer and the perfection of the Siemens-Martin and basic open-hearth processes, which resulted in the general substitution of steel for iron. This new manufacture required vastly greater plants and larger investments than did the simpler manufacture of iron. As the tonnage of the product increased by leaps and bounds, the demand for greater investment and more capital was incessant. The Carnegie Co. showed by its example the immense advantage of complete integration from the ore and coal and limestone to the finished product with facilities of transportation by land and water.

THE CARNEGIE STEEL CO.

The history of this company is so typical of the marvelous growth of the iron and steel business, and especially of the tendency to expansion and integration, and it became so important a part of the United States Steel Corporation, and its activities were so intimately connected with the movement toward the formation of that company, that it deserves a more extended notice than is necessary in the case of the other subsidiaries of that corporation.

In 1858 Andrew Kloman and his brother Anton built a small forge in Girtys Run, now a part of Allegheny. This was the nucleus of the Carnegie Co.

In 1859 Thomas N. Miller and Henry Phipps became partners in this concern with the Klomans.

The business having prospered, a new partnership agreement was entered into between the Klomans and Phipps, who also represented Miller, under the date of January 1, 1862. The capital of the firm was stated to be $80,000.

The new firm proceeded to build a new mill on Twenty-ninth Street, in Pittsburgh, which was given the name of the Iron City forge.

Some difficulty having arisen in the firm, Miller bought out the interest of Anton Kloman, April 16, 1863.

A little later, in the same year, difficulties having again developed, in the company, Miller sold his interest to Thomas M. Carnegie, who bought with money furnished by his brother, Andrew Carnegie.

This was Andrew Carnegie's first entrance into the iron business. He himself fixes the date as November, 1861. But the facts stated by Bridge seem to indicate that Mr. Carnegie was mistaken as to this date.

Miller now having severed his connection with the firm of Klom & Co., and Andrew Carnegie not appearing in that firm as a partn on the face of the papers, he and Miller, with others, organized t Cyclops Iron Co., and in 1864 built a rival mill at Thirty-third Stre in Pittsburgh.

In 1865 the Union Iron Mills Co. was organized, and took over bo the Kloman and Phipps mill, at Twenty-ninth Street, and the Cyclo mill at Thirty-third Street, which were thereafter known as the Upp and Lower Union Mills.

The Twenty-ninth Street property was taken over by the Union a valuation of $150,000, and the Thirty-third Street property at valuation of $50,000, and the capital of the company was fixed $500,000.

In the meantime, in April, 1865, the Keystone Bridge Co., in whi Andrew Carnegie was a prominent figure, had been formed to ta over the bridge works of Piper & Schiffler, at Pittsburgh. It had capital of $300,000.

On December 1, 1870, Andrew Kloman, Henry Phipps, and t Carnegies organized the firm of Kloman, Carnegie & Co., and the ne spring began the construction of the famous Lucy furnace, at Fift first Street, in Pittsburgh.

This furnace began with a production of 350 tons of pig iron a wee which was regarded as a fair average, but before the end of the ye its production had arisen to 500 tons a week, and the next year a ne record of 578 tons a week was reached. In October of this yea 1874, it reached a weekly production of 653 tons. In October, 187 it had reached a production of 762 tons a week. In 1878 it h raised this record to 804 tons in a single week, and in 1880 to 945 to a week. In 1883 the production reached 300 tons a day.

This astonishing record is but one example of the wonderful ef ciency that in the end characterized all of the Carnegie plants.

The year 1873 marks the entrance of Andrew Carnegie into t business of manufacturing steel. William Coleman, father-in-law Thomas M. Carnegie, had obtained an option on what was known Braddock's Field, paying some $59,000 for the tract, subject to mortgage of $160,000. In January of that year the firm of Carnegi McCandless & Co. was formed with a capital of $700,000, of whi Coleman furnished $100,000; Andrew Kloman, Henry Phipps, M Candless, Scott, Stewart, and Thomas M. Carnegie each subscrib $50,000 and Andrew Carnegie $250,000. Thus was started the gre enterprise which afterwards became famous as the Edgar Thoms Steel Works. On October 12, 1874, the firm of Carnegie, McCandle & Co. was dissolved and the Edgar Thomson Steel Co. (Ltd.) w incorprated with a capital of $1,000,000 to take its place, and t unfinished works at Braddock were transferred to the latter corporation for $631,250.43, subject to a mortgage for $201,000.

In 1881 the firm of Carnegie Bros. & Co. (Ltd)., with a capital of $5,000,000, was formed to take over the Carnegie iron and steel interests. The properties included, and their estimated value, are as follows:

	Value.	Mortgage.
Edgar Thomson Works	$2,385,000	$594,000
Coal mines and coke ovens at Unity	80,000	....
Ore lands at Patton	35,000	....
Lucy furnaces	750,000	160,000
Union Iron Mills	630,000	....
Four-fifths interest in Larimer coke works	120,000	....
	4,000,000	....

The remainder of the capital, $1,000,000, was to be subscribed in cash, and the interest of the various stockholders was as follows:

Andrew Carnegie	$2, 737, 977. 95
Thomas M. Carnegie	878, 096. 58
Henry Phipps	878, 096. 58
David A. Stewart	175, 318. 78
John Scott	175, 318. 78
Gardnier McCandless	105, 191. 00
John W. Vandervort	50, 000. 00

It is interesting to note that the profits of the various concerns composing this consolidation for the last year previous to the consolidation was $1,885,197.46, of which amount the Edgar Thomson Steel Works contributed $1,625,000. Steel had driven iron into a very subordinate position.

On October 21, 1879, the Pittsburgh Bessemer Steel Co. (Ltd.) with a capital of $2,500,000, was organized by certain gentlemen in Pittsburgh, of whom Andrew Kloman was one. This company built the original Homestead works. The first steel was made in these works March 19, 1881, and the first steel rails on August 9 of the same year, and by September, 1881, the Homestead works were turning out 200 tons of rails a day. This company became very much embarrassed by a strike among their employees, and in October, 1883, they were glad to sell the property to the Carnegie group.

On June 4, 1886, the Duquesne Steel Co. was organized to build the Duquesne plant as a rival to the Carnegie plants. Its capital was $350,000. The enterprise was subsequently reorganized in March, 1888, as the Allegheny Bessemer Steel Co., with a capital of $700,000. This company, though it showed great superiority in the mechanical construction of its plant, was not markedly successful financially, and in October, 1890, passed into the hands of the Carnegie interests for a consideration of $1,000,000 for the plant. Mr. Bridge remarks that the Carnegie interests, as a result of this transaction, once more w without a rival rail mill in their own territory.

On July 1, 1892, the Carnegie Steel Co. (Ltd.) was organized w a capital of $25,000,000, and took over all of the Carnegie interes namely, Upper and Lower Union mills, Lucy furnaces, Edgar Tho son Steel Works, Homestead plant, Duquesne plant, Keystone Bri Works, Beaver Falls plant (unsuccessful), and some small intere in iron ore and natural gas.

Mr. Frick, who was now in active charge of the company, b the Union Railway to connect the principal works with each ot and with the different transportation systems entering the Pit burgh district.

In 1886 Mr. Schwab built the first open-hearth furnace at Hon stead. (Bridge, pp. 1, 3, 4, 6, 8, 9, 10, 11, 17, 21, 23, 55, 57, 58, 77, 134, 151, 152, 159, 174, 175, 179, 254, 256; Hearings, pp. 23 2465.)

OLIVER IRON MINING CO.

Previous to the organization of the Carnegie Steel Co. (Ltd.) 1892, the various Carnegie interests that were then united in t company purchased nearly all their ore supplies. But Mr. Frick w now in active control of the company and the spirit of integrati was in the air. In 1892 Henry W. Oliver, of Pittsburgh, organi the Oliver Iron Mining Co. to operate the Mesabi Mountain mine the Mesabi Range.

Mr. Frick purchased for the Carnegie Co. a one-half interest in Oliver Iron Mining Co. for a loan of $500,000, to be spent in dev opment of the property. And a little later the interest of the C negie Co. was increased to five-sixths of the total stock. At t time the capital of the Oliver Iron Mining Co. was $1,200,000.

In 1896 the Oliver Iron Mining Co. leased from the Rockefel interests very large bodies of iron ore on the Mesabi Range in M nesota. The royalty was 25 cents a ton with a guaranteed out of 600,000 tons a year, to be shipped over the Rockefeller railro and steamships on the lakes, with an equal amount from the Oli mine. This amounted to 1,200,000 tons a year and the contract for 50 years.

Mr. Carnegie states that the royalty was 15 or 20 cents a ton, as he spoke entirely from memory, Mr. Bridge's statement would se to be the more trustworthy. Whatever the rate was Mr. Carne was anxious to consummate the bargain and regarded it as a gr victory. He says, "When we discovered that we could put Roc feller ore into that open-hearth steel, as I described to you this mo ing, I said to Mr. Gayley, who is with you now and I think has testif before you: 'Gayley, you go and sleep in New York and do not co home until you bring us a lease of the whole Rockefeller ore.' Gay went." Mr. Carnegie adds: "Don't you know it does my heart good to think I got ahead of John D. Rockefeller on a bargain."

After the acquisition of the Rockefeller ore, and before the organization of the United States Steel Corporation, the Oliver Iron Mining Co. had greatly added to its already immense ore holdings.

It is deeply to be regretted that the investigator for the committee, Mr. MacRae, did not see fit to obtain, when he had ample opportunity to do so, a complete statement of the properties so acquired, and their cost. This is but one example of the utter worthlessness of very much of the information collected by the investigators of the committee. It appeared in the hearings, that as first organized, the Oliver Iron Mining Co. had a capital of $1,200,000, nominal. The inference is fair that only a small portion of this amount was actually paid in at that time, for the Carnegie Co. acquired a one-half interest in the Oliver Iron Mining Co. for a loan of $500,000, which was to be repaid. Soon after the organization of the United States Steel Corporation that company acquired a one-sixth interest in the Oliver Iron Mining Co. for $9,250,000 of its preferred stock and an equal amount of its common stock, which at its then market value would amount to about $12,000,000. The committee was naturally much interested in the question how a company, a one-half interest in which could be acquired in 1892 for the loan of $500,000, should have so increased in value that a one-sixth in it sold in 1901 for about $12,000,000.

Mr. McRae examined the minutes of the Oliver Iron Mining Co., which would have shown all of the facts relating to this enormous increase in value. But he contented himself with the statement that "the minutes of the Oliver Mining Co. consist of twelve or thirteen hundred closely written, or typewritten, pages replete with the purchase of ore lands, or leases of ore lands, or leased ore lands"; and then follows a brief and fragmentary statement of the names of a few of the properties acquired, and in a very few instances of the price paid. But from this fragmentary and unsatisfactory statement, and from other bits of testimony cropping out here and there in the hearings, it is clear that the amount and value of the property acquired by this company between the date when the Carnegie Co. acquired a half interest therein and the acquisition of a one-sixth interest by the United States Steel Corporation was enormous. In addition to the Rockefeller lands, the acquisition of which so rejoiced Mr. Carnegie, this company acquired between the dates mentioned the Tilden and Norrie groups, a three-fourths interest in the Queen or Negaunee group, the Aurora mine, the Aragon mine, a three-fourths interest in the Lake Superior Iron Co., which in addition to its mines owned a fleet of boats upon the Lakes; the Chapin mine, a one-half interest in the Pewabic mine, the Mansfield mine, and the Race Track property, all of which mines are in Michigan. Also the Pioneer and Zenith mines, on the Vermilion Range, and the Pittsburgh Steamship Co., with a capital of $5,000,000, $1,000,0 of which was represented by stock and $4,000,000 by bonds. Th list, it is evident, is very incomplete; but it at all events shows th the property which the United States Steel Corporation acquir in 1901 was an entirely different and immensely greater proper than that in which the Carnegie Co. acquired an interest in 18 In fact, practically all of the property of this company was acquir between these two dates. That these great ore holdings had add many millions to the value of the Carnegie Co. is evident.

The latter company having acquired a large amount of ore in t Lake Superior district, with a fleet of vessels for transporting ore from Lake Superior to Lake Erie ports, in 1896 acquired t nearly bankrupt and, but for its franchises, practically worthle Pittsburgh, Shenango & Lake Erie Railroad, and rebuilt and co tinued the same to Conneaut, thus completing its transportati line for its ore from Lake Superior to its various plants in and abo Pittsburgh. It also owned part of the stock of the Henry C. Fri Coke Co. (Bridge, pp. 257, 259, 260, 261, 267, 272, 273, 308. Ca negie, hearings, pp. 2391, 2392, 2466; Hearings, pp. 2363, 2395, 38 3921, 4098, 4109, 4110.)

Mr. Gayley describes the growth of the Carnegie Co. from the ti he entered its service in 1885 to its absorption by the United Stat Steel Corporation as "tremendous," and adds that the improv ments in methods during that period had increased the earn capacity of the plant "tremendously." The Carnegie Co. in 19 owing to its location, ownership of raw materials, and splendid orga ization was easily the leading steel company in this country.

Light is thrown from a different angle upon its wonderful grow by an examination of its earnings from 1876 to 1900, both inclusi as set forth by Mr. Bridge, in the Inside History of the Carneg Steel Company. The figures follow:

Profits Carnegie interests, finally merged in the Carnegie Co.

1876	$181,007.18	1889	$3,540,000.
1877	190,379.33	1890	5,350,000.
1878	[1] 401,800.00	1891	4,300,000.
1879	512,068.46	1892	4,000,000.
1880	1,885,197.46	1893	3,000,000.
1881	2,000,377.46	1894	4,000,000.
1882	2,128,422.91	1895	5,000,000.
1883	1,019.233.04	1896	6,000,000.
1884	1,301,180.28	1897	7,000,000.
1885	1,191,993.54	1898	11,500,000.
1886	2,925,350.08	1899	21,000,000.
1887	3,441,887.29	1900	40,000,000.
1888	1,941,555.44		

(Bridge, pp. 97, 99, 100, 102, 134, 295.)

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[1] Edgar Thomson Steel Works alone.

In 1900 the remainder of the stock of the Henry C. Frick Coke Co. was acquired, and all the Carnegie interests, which had been greatly increased in extent, value, and earning power, were merged into a new company, created for that purpose and named the "Carnegie Co." It had a capitalization of $160,000,000 in bonds and $160,000,000 in stock and, in addition, $25,081,813 in purchase-money obligations and underlying indebtedness. This company was organized under the laws of the State of New Jersey.

Truly, Andrew Kloman's little forge, in Girtys Run, had developed marvelously, and the modest company, which, in 1862, was capitalized at $80,000, had increased in value with comfortable celerity.

All of the increase, however, had not come from within. Capital had been added from without from time to time; but making due allowance for the added capital, the growth from within had been so remarkable as to read like a story from the Arabian Nights.

While this company had at times made agreements with its competitors as to prices and percentage of output (to be discussed in a later part of this report), its general policy had been to rely on its superior advantages as to location, plant, and capital, coupled with the ability of its organization, and keep its mills running without much reference to the wishes or interests of its competitors.

While it had at times bought out its competitors, as in the cases of the Homestead and Duquesne companies, it had only done so where it could buy cheaper than it could build. There can be no question that the main purpose of its extensions was the enlargement of its business, and in later years the complete integration of the plant, raw material, and transportation facilities, the avoidance of paying profits to others, and the cheapening of production. It did not pay overmuch attention to its competitors, but relied on its strength to meet all challenges and come off best in the encounter.

OTHER IRON AND STEEL COMPANIES.

While the Carnegie Co. was developing in the manner described, others engaged in the same industry had not been idle. The tendency to concentration in fewer plants with larger capitalization, which began with the substitution of anthracite and bituminous coal for charcoal, proceeded at an accelerated pace as the industry grew in importance.

From the beginning of the manufacture of Bessemer steel, in 1867 until 1883, there had been no halt in the industry, each year showing a greater tonnage than the preceding. The efforts of all engaged in the business were taxed to the utmost to keep up with the growing demand. The output had grown from 19,643 tons of steel in 1867 to 1,736,692 tons of steel in 1882. This ever-increasing demand was met in the main by the extension of existing plants, though the consolidation of the plants of separate owners was not unknown.

The industry received two setbacks—one in 1883 and the other 1888—but notwithstanding this the production had greatly increase in the entire period, and in 1889 there was a sharp recovery.

THE ERA OF CONSOLIDATION.

Simultaneously with this recovery an era of consolidation set i This reached a climax in the period from 1898 to 1901. Mr. Herbe Knox Smith gives two tables showing the consolidations in the yea 1898–99 and 1900, the first being those that were later merged the United States Steel Corporation and the second those that we not so merged.

Those tables are as follows:

TABLE 1.—*Leading consolidations in the iron and steel industry, 1898–1900.*

[A. Consolidation later merged into the United States Steel Corporation.]

Name and year of organization.	Preferred stock.	Common stock.	Bonds.
1898.			
American Steel and Wire Co. of Illinois	$12,000,000	$12,000,000	....
Federal Steel Co	100,000,000	100,000,000	$30,217,
American Tin Plate Co	20,000,000	30,000,000	273,
1899.			
American Steel and Wire Co. of New Jersey	40,000,000	50,000,000	130,
American Steel Hoop Co	14,000,000	19,000,000	....
National Steel Co	27,000,000	32,000,000	2,561,
National Tube Co	40,000,000	40,000,000	....
1900.			
American Bridge Co	35,000,000	35,000,000	156,
American Sheet Steel Co	26,000,000	26,000,000	2,000,
Carnegie Co. of New Jersey	....	160,000,000	185,081,
Shelby Steel Tube Co	6,000,000	9,000,000	....
Total	320,000,000	513,000,000	220,419,

In most cases practically all of the authorized securities we actually issued. The most conspicuous in this list were the Feder Steel Co., which issued originally about $30,500,000 of each clas and the American Tin Plate Co., which retained in its treasury abo $2,000,000 preferred and $2,000,000 common stock.

[B. Consolidations not subsequently merged into the United States Steel Corporation.]

Name and year of organization.	Preferred stock.	Common stock.	Bonds.
1899.			
American Car & Foundry Co	$30,000,000	$30,000,000	....
American Iron & Steel Manufacturing Co	3,000,000	17,000,000	....
Empire Steel & Iron Co	5,000,000	5,000,000	....
National Enameling & Stamping Co	10,000,000	20,000,000	$600,
Pressed Steel Car Co	12,500,000	12,500,000	....
Republic Iron & Steel Co	25,000,000	30,000,000	....
Sloss-Sheffield Steel & Iron Co	10,000,000	10,000,000	3,835,
United States Cast-Iron Pipe & Foundry Co	15,000,000	15,000,000	....
Virginia Iron, Coal & Coke Co	....	10,000,000	10,000,
1900.			
Crucible Steel Co. of America	25,000,000	25,000,000	....
Total	135,500,000	174,500,000	14,435,

CONSOLIDATIONS SUBSEQUENTLY MERGED IN THE UNITED STATES STEEL CORPORATION.

THE ILLINOIS STEEL CO.

The first important consolidation was the Illinois Steel Co., which was formed by combining the North Chicago Rolling Mill Co., which owned a branch plant at South Milwaukee, the South Chicago Rolling Mill Co., the Union Rolling Mill Co., and the Joliet Rolling Mill Co. It was capitalized at $25,000,000, $18,000,000 of which was issued. These plants had competed previous to the consolidation, but with the growth in the industry a larger organization for economy and efficiency was necessary. And while the desire to eliminate competition may have been one of the motives in this consolidation, undoubtedly the main motive was the desire for a better and more efficient organization and promotion profits, which now seem very moderate.

THE FEDERAL STEEL CO.

In September, 1898, the Federal Steel Co. was organized. It was a merger through stock purchase of the Illinois Steel Co., heretofore referred to, and the Minnesota Iron Co., which owned extensive ore properties on the Vermillion Range, estimated at about 250,000,000 tons of ore. It owned the stock of the Duluth and Iron Range Railroad, which extended from Lake Superior to both the Vermillion and Mesabi Ranges. It also owned the Minnesota Steamship Co., thus providing for the transportation of the ore from its mines to lower lake ports.

To these two principal corporations were added the Lorain Steel Co. at Lorain, Ohio, and the Johnstown Steel Co. at Johnstown, Pa.

The Federal Steel Co. also acquired the stock of the Elgin, Joliet & Eastern Railway, a belt line of 180 miles, connecting with nearly every railroad entering Chicago. This road directly served the Joliet plant of the company and formed a connection with its other plants. The Illinois Steel Co. also controlled the Chicago, Lake Shore & Eastern Railway Co., which connected its various plants in and about Chicago.

The principal companies in this consolidation had been closely connected through common-stock ownership and business. Some friction had arisen in regard to the price of ore charged the Illinois Steel Co. by the Minnesota Iron Co., between those stockholders of the Illinois Steel Co. who were interested in the Minnesota Iron Co. and those who were not. A desire to settle this difficulty was one of the purposes of the consolidation. Another purpose was the integration of the business from the ore to the finished product. The competition between the Illinois Steel Co. and the Lorain Steel Co. was insignificant, and it is improbable that the desire to eliminate competition played any part in the organization of this corporatic (Gates, hearings, pp. 28, 29; Herbert Knox Smith Rept., pt. 1, p 63, 87, 88; Gary, hearings, pp. 201, 202, 203, 204; Bacon, hearing pp. 5322, 5323, 5324.)

THE AMERICAN STEEL & WIRE CO.

As early as 1874 John W. Gates had engaged in the wire busine With him was associated a little later Isaac L. Ellwood. Gate first wire company was the Southern Wire Co. of St. Louis. To th was added, by purchase, the St. Louis Wire Mill Co., and a new pla was erected at Braddock, near Pittsburgh, Pa., which was known the Braddock Co. Later Mr. Gates and his associates acquired t Lambert & Sheffield Co., of Joliet, and one or two others. These we operated separately for a time, and about 1891 they were united in one company under the name of the Consolidated Steel Wire Co. Illinois. In 1898 the Consolidated Steel Wire Co. of Illinois w merged in the American Steel & Wire Co. of Illinois with a capital $12,000,000 preferred and $12,000,000 common stock. In 1899 th latter company, the Washburn Manufacturing Co. of Worceste the Worcester Wire Co., the Cleveland Wiring Mill Co., the Americ Wire Co. of Cleveland, the R. B. Nail Co., the Cincinnati Barb Wi Fence Co., the Oliver Wire Co., and several others, probably 50 plan in all, were merged into the American Steel & Wire Co. of New Jerse The American Steel & Wire Co. was capitalized at $40,000,000 pr ferred and $50,000,000 common stock. About two-fifths of the plan it had acquired were dismantled or concentrated. The compani merged in the American Steel & Wire Co. competed to a considerab extent, according to their location. (Gates, hearings, pp. 24, 2 Herbert Knox Smith Rept., pt. 1, pp. 91, 92.)

Undoubtedly the desire to reduce competition played an importa part in this consolidation and the desire to decrease the cost of pr duction, by concentrating the plants, eliminating those badly locate and reducing overhead charges, and creating more salable securitie were equally influential.

THE MOORE PROPERTIES.

The National Steel Co., the American Sheet Steel Co., the America Tin Plate Co., and the American Steel Hoop Co. were all promoted b Judge W. H. Moore, of Chicago. The National Steel Co. manufa tured crude steel which was consumed largely by the other thr companies in the group. Together they made a fairly well-integrate concern. They were heavily capitalized, composed in many instanc of competing concerns, and the promotion profits were very grea Their organization had been well timed and stock sold well upon th market. Unquestionably promotion and stock profits played considerable part in these organizations. The Tin Plate Co. controlled a very large proportion of the business in this country. (Herbert Knox Smith Rept., pt. 1, pp. 89, 90, 91.)

OTHER COMPANIES.

The National Tube Co. was a merger of 13 independent concerns, between which there was competition previous to the merger. (Herbert Knox Smith Rept., pt. 1, p. 92.)

The American Bridge Co. was also a consolidation of previously competing concerns. It never had very much control over the market and that amount has steadily decreased since its organization, owing to the rapid increase of independent rivals. (Herbert Knox Smith Rept., pt. 1, p. 93.)

The Shelby Steel Tube Co. was a small concern which owned a valuable patent for making seamless tubes. (Herbert Knox Smith Rept., pt. 1, p. 93.)

Unquestionably the desire to limit severe or destructive competition played an important part in the organization of all of these companies, save the Carnegie Co. and the Federal Steel Co., the two most important companies, merged in the United States Steel Corporation.

The period from 1899 to 1901, inclusive, was one of great prosperity, not only in the iron and steel industry, but in all lines of business. The success of the consolidations already accomplished seemed assured. Their earnings were large, the profits of their promotion had been great, and the daily quotations of their stocks showed handsome advances upon the value of the properties at the time of the consolidation. This in itself would have been sufficient to lead to greater consolidation and integration. But other reasons were not wanting.

EFFORTS TO SELL THE CARNEGIE COMPANY.

Mr. Carnegie wished to retire from business. As early as 1889 he desired to sell the Carnegie properties and endeavored to dispose of them to some English capitalists. This effort failed. This project was again taken up ten years later. Mr. Bridge states that on January 5, 1899, at a meeting held at Mr. Carnegie's house in New York, it was decided to sell the Carnegie Co. stock for $250,000,000 to a syndicate of New York and Chicago capitalists, payment to be made one-half in cash and one-half in 50 year 5 per cent gold bonds. These terms were rejected by the syndicate.

Several plans of consolidation and reorganization were under discussion when in the early spring of 1899 the owners of all the stock in the Carnegie Co. gave a power of attorney to Messrs. Frick and Phipps to sell it for $250,000,000. This did not include the

H. C. Frick Coke Co. In pursuance of this power of attorney Messrs. Frick and Phipps gave an option on the property to Judge Moore, of Chicago, and others for $250,000,000, under the terms of which Moore and associates were to forfeit $2,000,000 if they failed to take the property. This option bears the date of April 24, 1899. Its principal terms are set forth by Mr. Bridge, accompanied by a prospectus prepared in furtherance of the sale.

Mr. Moore and his associates were unable to dispose of the property under their option, and Mr. Carnegie exacted his portion of the forfeiture, something over $1,000,000.

It was in furtherance of this sale that Mr. Schwab, on May 15, 1899, wrote the frequently quoted letter in which he stated that the Carnegie Co. could make rails for less than $12 a ton. Mr. Schwab, referring to this letter, says, "First of all I want to say that that letter was written as an enthusiastic optimistic young man seeking *preferment* in a great company." He adds that the $12 a ton was mill cost and included none of the general charges. Mr. Schwab adds, secondly, "I wish to explain the motive of that letter. The letter was written at Mr. Frick's solicitation. It was at a time when he was anxious to dispose of the Carnegie Co., and it was also written in an optimistic vein for like reasons. If you will bear that in mind in reading that letter you will probably understand it better."

It will thus be seen that the principal stockholders in the Carnegie Co., as early as January, 1899, were making systematic efforts to dispose of the property.

A good deal of misconception has arisen in the public mind as to the value of the Carnegie Co., growing out of the disclosures made in a certain suit brought by Mr. Frick against Mr. Carnegie. An agreement known as the "iron-clad agreement" had been entered into between Carnegie Bros. & Co. (Ltd.), and the partners composing it, by which each of the partners bound himself to sell his interest to the company at its value, as it appeared on the books of the company, whenever requested to do so by three-fourths in number and in interest of the partners.

Some difficulty having arisen between Mr. Frick and Mr. Carnegie, it was sought by the latter and some of his associates to enforce this agreement against Mr. Frick. This Mr. Frick resisted. The pleadings in the case which resulted are set forth at length in the hearings, No. 36, page 2550 et seq. The book value of the assets of the Carnegie Co. on the 31st of December, 1899, was $75,610,104.06. The testimony as to how this was arrived at is conflicting and uncertain, but it is clearly apparent that it did not represent either the judgment of the owners of the property as to its worth, nor did it represent what it had actually cost. It seems clear that the partners, either with a view to enforce harmony in the company through the fear of serious losses to be incurred by the enforcement of the "iron-clad agreement" and the sale of a partner's interest for much less than its true value or for its effect upon taxing officers or merely from pride in keeping the book value far below the real value or as a matter of policy or for some other reason actually did fix this value at far less than the true value.

The real issue in the suit was whether Mr. Frick was bound by the "iron clad agreement" and could be compelled to take less than the real value of his property because the book value was less. The answer of the defendants does not assert that the book value represented the true value of the property; it does not even assert that it represented the cost of the property. The nearest it comes to the latter assertion is the following statement: "*To a large extent* this book value represents the actual cost of the properties represented in the balance sheets of the association." Messrs. Frick and Phipps joined with Judge Moore and his associates in taking the option for the purchase of the Carnegie properties, at a valuation of $250,000,000, for which privilege the negotiators, including Messrs. Frick and Phipps, agreed to pay $2,000,000. It is unbelievable that at the time this option was given and received anybody connected with the Carnegie Co. believed that the book value was the real value of the property. Three of the defendants in that suit, Messrs. Carnegie, Schwab, and Gayley, appeared as witnesses before the committee, and each asserted that the book value did not represent the true value.

The suit of Mr. Frick was never tried, but resulted in a consolidation of the Carnegie Co. with the H. C. Frick Coke Co., under the name of the Carnegie Co., with a capital of $160,000,000 in stock and $160,000,000 in bonds, as previously related. Seventy million dollars was considered the value of the H. C. Frick Coke Co. and $250,000,000 the value of the old Carnegie Co. This was the condition of affairs when the movement was started for the organization of the United States Steel Corporation. (Bridge, pp. 293, 294, 299, 300, 305 to 312; hearings—Carnegie, pp. 2372 to 2378, 2396, 2409, 2413, 2407; Schwab, pp. 1308 to 1322, 1324, 1333, 1364, 1366, 2559; Gayley, pp. 309, 310; Judge Reed, pp. 2402, 2408, 2409.)

THE UNITED STATES STEEL CORPORATION.

The United States Steel Corporation owed its origin largely to the desire of Andrew Carnegie to sell out his business and to the active promotion of Mr. Charles M. Schwab. In the fall of 1899 Mr. Schwab was given a dinner in New York which was attended by a large number of leading financiers and business men of that city. Mr. Schwab in an after-dinner address chose as his subject the future development of the steel business in this country and dwelt upon the great advantages that would result in manufacture from such an organization as the United States Steel Corporation became, working out his ideas in detail. The address appears in full in the hearings, beginning on page 1280. Among the gentlemen present at that banquet were Mr. J. P. Morgan, Mr. Harriman, Mr. Carnegie, and Mr. Phipps. No suggestion is made in the testimony that this banquet was arranged for the purpose of bringing a consolidation of the iron and steel interests to the attention of the capitalists assembled, but the internal evidence is strong that such was its real purpose.

At the same time the Carnegie Co. was contemplating the building of a tube mill or a wire mill at Conneaut, and there was a discussion as to a railroad to connect Pittsburgh with the seaboard. It is insisted by the witnesses that these were simply matters of natural growth and were considered only from the basis of the natural development and extension of the business. No attempt seems to have been made to keep these purposes secret, and knowing the desire of those interested in the Carnegie Co. to dispose of it, something more than a suspicion is raised that these were moves in the interest of a sale. It is claimed, at all events by certain witnesses, that considerable uneasiness was developed among rival manufacturers and railroad men as to these activities.

Some time after the Schwab dinner Mr. Schwab was called up over the telephone by Mr. John W. Gates and asked if he would meet Mr. Morgan. The interview took place in New York City. This was the beginning of the negotiations which led to the organization of the United States Steel Corporation. Mr. Gates states that he called up Mr. Schwab at the request of Mr. Morgan, who a short time previously had organized the National Tube Co. Mr. Gates states that Mr. Morgan asked him how Carnegie could be stopped from building a railroad to the Lakes and building a tube works at Conneaut, and he suggested the calling of Mr. Schwab. Mr. Gates was evidently in error in regard to the railroad to the Lakes, for that road was completed before this conversation took place. Mr. Gates was at this time a commanding figure in the American Steel & Wire Co., which also went into the combination. He states that his purpose in assisting the organization was to convert a lot of doubtful assets into cash.

Judge Gary states that Mr. Frick, some time previous to the giving of the Moore option by the Carnegie Co., though he thinks the date was early in 1900, while as a matter of fact the Moore option was given earlier than that, approached him with a proposition to sell the Carnegie Co. Judge Gary consulted certain other gentlemen about the matter, but it came to nothing. Later Mr. Schwab approached him, suggesting that the Federal Steel Co. purchase the Carnegie properties. He approached Mr. Morgan in regard to it, but received no encouragement at that time. Subsequently Mr. Schwab met Mr.

Morgan and presented to him a letter from Mr. Carnegie, stating that he, Mr. Carnegie, would sell his properties and take his pay in bonds secured on the properties. This was after the interview between Mr. Gates and Mr. Morgan. A considerable amount of negotiations then occurred, in which Judge Gary, Norman B. Ream, H. H. Rogers, D. O. Mills, H. H. Porter, and Marshall Field, representing the Federal Steel Co., and Mr. Schwab, representing the Carnegie Co., and various other gentlemen, representing other companies, finally combined in the United States Steel Corporation, took part. It is greatly to be regretted that the committee did not accept the suggestion made by Hon. A. P. Gardner, at a time when Mr. J. P. Morgan was in this country, to subpœna him as a witness upon this and other phases of the investigation.

These negotiations resulted in the organization of the United States Steel Corporation. The legal advisors in this organization were Francis Lynde Stetson and Victor Morawetz.

The capitalization of the corporation, when finally completely organized in August, 1901, was as follows:

Preferred stock	$510, 205, 743
Common stock	508, 227, 394
United States Steel Corporation	303, 450, 000
Underlying bonds	59, 091, 657
Purchase money obligations, real estate mortgages	21, 872, 023
	1, 402, 846, 817

It was a purely holding company. Its assets consisted of a working capital of $25,000,000 and all of the capital stock of the Carnegie Co., the Federal Steel Co., the American Steel & Wire Co. of New Jersey, the National Tube Co., the National Steel Co., the American Tin Plate Co., the American Steel Hoop Co., the American Sheet Steel Co., the American Bridge Co., the Consolidated Lake Superior Iron Mines, the Shelby Steel Tube Co., and a one-sixth interest in the Pittsburgh Steamship Co., and the Oliver Iron Mining Co., except about half a million dollars' worth of the capital stock of the various companies, which was owned by different individuals.

VALUE OF ASSETS.

Mr. Herbert Knox Smith estimates the value of the tangible assets of the constituent concerns of the United States Steel Corporation on April 1, 1901, as $676,043,000. This estimate is made by taking the property of each constituent company separately. He makes another estimate by classifying all the property of the corporation according to its character, as ore property, manufacturing plants, etc., and this estimate amounts to $682,000,000. In making the last estimate he placed a valuation of $100,000,000 on the ore properties, and presumably he has figured the ore properties belonging to the constituent companies in the first estimate at about the same sum. The United States Steel Corporation itself, in a suit pending in July, 1902, estimated the value of its ore properties at $700,000,000, and the enormous difference in this estimate from that of Mr. Smith constitutes the main difference between his estimate and that of the United States Steel Corporation itself. There can be no question that the value of $700,000,000 was a great deal too high, but it does not necessarily follow that Mr. Smith's valuation is right. Unquestionably the value of this kind of property is very difficult to estimate. The reasoning on which Mr. Smith bases his conclusions is not at all conclusive. Many wild guesses have been indulged in as to the value and amount of the ore in the Lake Superior district owned or leased by the United States Steel Corporation. Mr. Schwab and Mr. Munsey both exercised their imagination on this interesting subject. Let us look at the real estimates.

The Minnesota tax commission in 1909 estimated the holdings of the United States Steel Corporation on the Mesabi Range, outside of the so-called "Hill lease," at 523,547,252 tons, and the holdings on the Vermillion Range at 8,000,000 tons.

Mr. Joseph Sellwood, who is a mining man of large experience, and who purchased for the Minnesota Iron Co. its large holdings of nearly 250,000,000 tons of ore, which became later a part of the United States Steel Corporation's holdings, estimates the tonnage of the United States Steel Corporation on the Mesabi Range at 550,000,000 tons, and its holdings on the Vermillion Range at 20,000,000 tons.

Mr. T. F. Cole, who was formerly president of the Oliver Iron Mining Co., and in charge of all the mining operations of the United States Steel Corporation in the Lake Superior district until three years ago, when he severed his connection with the corporation, and whose knowledge of their holdings is probably more intimate and complete than that of any other man, estimates their entire holdings in the State of Minnesota, outside of the "Hill lease" at 750,000,000 tons, or a little over 50 per cent of all the ore in that State so far discovered.

Mr. James R. Finlay, who made a very careful and elaborate estimate of the ore tonnage and value of the mining property in the State of Michigan for the Michigan State Tax Commission, under date of December 11, 1911, estimates the entire ore holdings of the United States Steel Corporation in Michigan at 54,932,355 tons.

This, taken with Mr. Cole's estimate of the Minnesota ores, would make a total of a little over 800,000,000 tons.

Now, as to its value, Mr. Finlay estimates the mines of the United States Steel Corporation in Michigan to be worth $42,645,000.

Mr. Sellwood estimates the value of iron ore on the Mesabi Range at 25 to 30 cents a ton in the ground, and adds that at the time the United States Steel Corporation was formed he could have bought some, but not all, of its ore lands at a rate of 30 cents a ton.

Mr. Cole fixes the value of ore in the ground on the Mesabi Range at about 35 cents a ton for Bessemer and 20 cents a ton for non-Bessemer.

The Minnesota Tax Commission fixes a price on ore mines, for purposes of taxation, at from 14 to 33 cents a ton, according to quality and mining conditions, and states that it fixes values on the property of Minnesota at about 40 per cent of its true value.

It will be noted that Mr. Finlay fixed the valuation of Michigan ores, for purposes of taxation, at an average of about 80 cents a ton. These ores are more valuable per ton than the Minnesota ores.

Finally, Mr. Rukard Hurd, secretary of the Minnesota Tax Commission, states that in 1910 the Minnesota Tax Commission assessed the mining properties of the Vermillion and Mesabi Ranges at $225,000,000, "the value of which approximates $562,000,000."

Assuming these figures to be correct and taking Mr. Cole's estimate that the United States Steel Corporation owns a little over 50 per cent of the ores of the Mesabi Range and all of the ores on the Vermillion Range, say 53 per cent of the Minnesota ores, we would have, according to the Minnesota Tax Commission figures, a value on the Minnesota ores of the United States Steel Corporation of $297,860,000; add to this the valuation of the Michigan mines, as found by Mr. Finlay, $42,645,000, and we have $340,505,000.

It is true that the tax commission figures are of a later date than the organization of the United States Steel Corporation and that about one-half the ore controlled by the United States Steel Corporation is leased upon a royalty. But making all reasonable deductions for these causes it is difficult to fix a lower value on the 800,000,000 tons of ore of the United States Steel Corporation than 25 cents a ton, or $200,000,000.

Mr. Herbert Knox Smith also gives a table of the average market valuation of the stock of the constituent companies of the United States Steel Corporation covering a period from the organization of each to the 1st day of January, 1901. This table represents the value placed upon these properties by the investing public. Undoubtedly where, as in this case, the stock quotations are carried over a considerable length of time, they are one of the best evidences that can be obtained of value, provided the public has the opportunity to know the value of the properties contained in the estimate which are not immediately productive. It represents the consensus of opinion of many thousands of exceptionally shrewd people who have a direct interest in the subject. While stock fluctuations occur from day to day from causes which do not affect the real value of the properties, such aberrations correct themselves when carried over long periods of time.

The following is the table referred to (from Herbert Knox Smith Rept., pt. 1, p. 20):

Approximate market valuation of securities acquired by United States Steel Corporation in 1901, as indicated by average market prices, 1899–1900.

Constituent concerns.	Amount of stock acquired by United States Steel Corporation.	Average market price of stock in 1899–1900.	Value at average price.
Stocks regularly quoted:			
Federal Steel Co.—	*Par value.*	*Per cent of par value.*	
Preferred	$53,260,200	76.38	$40,680,141
Common	46,483,700	50.04	23,260,443
American Steel and Wire Co.—			
Preferred	39,999,000	89.41	35,763,106
Common	49,981,400	48.26	24,121,024
National Tube Co.—			
Preferred	40,000,000	94.20	37,680,000
Common	40,000,000	48.72	19,488,000
National Steel Co.—			
Preferred	26,996,000	91.16	24,609,554
Common	31,970,000	41.67	13,321,899
American Tin Plate Co.—			
Preferred	18,325,000	84.77	15,534,103
Common	28,000,000	34.77	9,735,600
American Steel Hoop Co.—			
Preferred	14,000,000	77.34	10,827,600
Common	19,000,000	32.11	6,100,900
American Bridge Co.—			
Preferred	31,357,600	93.10	29,193,926
Common	30,946,400	43.88	13,579,280
Shelby Steel Tube Co.—			
Preferred	4,776,100	56.48	2,697,541
Common	8,018,200	10.90	873,984
Stocks not actively quoted:			
American Sheet Steel Co.—			
Preferred	24,499,600	65.88	16,140,336
Common	24,499,600	19.00	4,654,924
Lake Superior Consolidated Iron Mines	29,413,905	75.00	22,060,429
Carnegie Co.:			
Bonds	159,450,000	105.00	167,422,500
Stock	160,000,000	100.00	160,000,000
Oliver Iron Mining Co., one-sixth interest	200,000	}	9,250,000
Pittsburgh Steamship Co., one-sixth interest	221,700		
Total	881,398,405		686,995,290
Mortgages and purchase-money obligations			21,872,023
Underlying bonds and scrip at par			59,091,657
Cash capital			25,003,000
Grand total			792,961,970

Of the stocks given in this table those of the Carnegie Co., the Lake Superior Consolidated Iron Mines, the Oliver Iron Mining Co., and the Pittsburgh Steamship Co. were inactive, so the values of the former two stocks were based on a few transactions and those of the last two on an estimate.

The foregoing table, however, represents all of the property acquired by the United States Steel Corporation for the $1,400,000,000 of securities issued.

It will be noticed that the figures in this table are about $110,000,000 higher than the highest of the other two tables. If the true value of the ore holdings of the United States Steel Corporation was $200,000,000, instead of $100,000,000, and this extra $100,000,000 were added to the estimate of the physical value of those properties, we would have a sum approximately equal to that which the investing public placed upon the combined stocks of the constituent companies. Too great reliance should not be placed upon the absolute correctness of these figures, but they no doubt represent a fairly good estimate of the value of the properties combined in the United States Steel Corporation.

If the table gives a fair estimate, it is evident that the common stock of the company represented nothing except the hopes and expectations of the stockholders as to future profits, and that the bonds and preferred stock of the United States Steel Corporation exceeded all of the assets it acquired. Without placing implicit reliance on this estimate of value, it is evident that the capital stock and bonds of the corporation exceeded by a very considerable amount the physical value of the properties it acquired. *The investing public took this view of the matter from the start.*

Mr. Herbert Knox Smith states that during the first year of the United States Steel Corporation's existence the average price of the preferred stock in the market was .94, and of the common stock .44.

Taking those figures and allowing the bonds of the corporation to have been worth par, we have the following as the estimate of the investing public of the value of the United States Steel Corporation for the first year of its existence:

$510,205,743, preferred stock at .94	$479, 594, 298. 42
$508,227,394, common stock at .44	223, 620, 043. 36
U. S. Steel Corporation bonds	303, 450, 000. 00
Underlying bonds	59, 091, 657. 00
Purchase money, obligations, real estate, mortgages	21, 872, 023. 00
	1, 087, 628, 021. 78

Or about $295,000,000 more than the value placed by the public on the stocks of the constituent companies, added to the $25,000,000 of working capital. This sum of $295,000,000 measures the increased value of these properties caused by the consolidation as estimated by the investing public. According to Mr. Schwab, this added value came almost entirely from economy in operation and transportation, and there is no doubt that these economies were very great.

Others will undoubtedly believe that the chief element in this increase in value was because of the supposed power to fix prices. No doubt both elements contributed in this increase. (Hearings: Schwab, pp. 1276, 1278, 1279, 1280, 1281, et seq, 1331, 1332; Gates,

pp. 31, 59; Gary, pp. 204, 205, 206, 207, 208, 211, on values; Herber Knox Smith Rept., pt. 1, pp. 14, 20, 19, 36, 29; Minnesota Tax Com mission, pp. 5377, 5365, 3457, 3455, 3459, 3480, 5368; Sellwood, pp 5365, 5370, 5387, 5367, 5368; Cole, pp. 5457, 5479, 5493; Finlay, p 2015; Rukard Hurd, p. 3459.)

After the organization of the United States Steel Corporation, fror time to time it added to its property by purchase and also by nev construction.

THE UNION STEEL CO.

In December, 1902, it purchased the entire capital stock of th Union Steel Co., which latter company had previously absorbed th Sharon Steel Co., the Sharon Ore Co., the Sharon Coke Co., th Sharon Sheet Steel Co., the Donora Mining Co., the Republic Cok Co., the River Coal Co., and a controlling interest in the Sharon Ti Plate Co., and the Sharon Coal & Limestone Co. This property wa paid for by the United States Steel Corporation by guaranteeing a issue of $45,000,000 of Union Steel Co. bonds. This amount included however, not only the purchase price of the stock of the Union Stee Co. but a sum estimated to be sufficient to complete the plants o that company then under construction and provide it with a workin capital. The total amount paid for the entire capital stock of th Union Steel Co. was $33,202,490, and the liquid assets of the Unio Steel Co. amounted to $2,341,989, leaving the cost of the propertie $30,860,501. (Report of U. S. Steel Corporation for 1902, p. 19 Herbert Knox Smith Rept., pt. 1, pp. 252 to 254, inclusive, and 28 to 286, inclusive.)

THE CLAIRTON STEEL CO.

In the spring of 1904 the United States Steel Corporation pur chased the entire capital stock of the Clairton Steel Co., which wa turned over on the 18th day of May of that year. Its property con sisted of its plant at Clairton, Pa., on the Monongahela River, an important ore properties in the Mesabi and Marquette Ranges an coking coal properties in Fayette County, Pa. The cost to the Unite States Steel Corporation of these properties was $13,710,565, includin net working assets of $2,951,005. The actual investment of th former owners in the Clairton property was $17,663,287.09. (Herber Knox Smith Rept., pt. 1, pp. 254, 255, 286, 287, 288.)

OTHER PURCHASES.

The United States Steel Corporation also acquired in the early year of its existence the Troy Steel Products Co. and the Trenton Iron Co The first was acquired in 1902 and the second in 1904. These pur chases were relatively insignificant. (Herbert Knox Smith Rept. pt. 1, pp. 255, 256.)

ACQUISITION OF IRON ORE.

It extended its ore holdings by leasings of ore from the Chemung Ore Co. in August, 1903, from the Canesteo Mining Co. in 1905, and by the so-called "Hill lease" in 1907. The latter lease embraced 39,296 acres of land. At the time it was executed it was rumored that said lands contained from four hundred to five hundred million tons of ore, but subsequent examination reduced this amount to 250,000,000 tons of available ores. The lease required that the ore should be shipped over the Great Northern Railway and the royalty provided for included the freight rate to Lake Superior, which freight rate was 80 cents a ton. The royalty rate, including this freight rate, was $1.65 per ton for 59 per cent ore for the first year and increased 3.4 cents per ton each additional year. The lease gave the lessee the option to cancel it after January 1, 1915, by giving notice thereof two years previously. This option has been already exercised. All of the lands not being actually worked have been surrendered and are now in the possession of the lessors. The remainder will, by the terms of the cancellation, pass into the hands of the lessor on January 1, 1915. The United States Steel Corporation has never increased the value placed upon its assets by itself because of this lease. The rate of royalty is so high as to have occasioned much comment. Mr. Andrew Carnegie described it as a speculation in ore and few were surprised when the United States Steel Corporation relinquished its rights therein.

THE TENNESSEE COAL, IRON & RAILROAD CO.

In the fall of 1907 the Tennessee Coal, Iron & Railroad Co. was acquired at an actual cost, including improvements made to the close of 1907, of $49,946,095.57. Payment was made for the stock in the bonds of the United States Steel Corporation, and its bonded debt of $14,226,000 was assumed. It should be stated, however, that the market value of the bonds issued by the United States Steel Corporation in payment of this property at the time—this being in the midst of the panic—was about $4,940,000 less than par. (Herbert Knox Smith Rept., pt. 1, pp. 256, 280, 289, 290, 292, 310, 311, 312, 324; United States Steel Corporation Rept. for 1910, opposite p. 32; Rept American Iron & Steel Association for 1910.)

But great as these additions to the assets of the United States Steel Corporation are, they are small indeed when compared with its increases in the way of new construction and added surplus.

These additions consisted of the building of the Gary plant, the acquirement of some further bodies of ore and coal, and extensive improvements in the manufacturing and transportation properties, and an increase in the working capital.

Mr. Herbert Knox Smith estimates that the net additions to the investment from April 1, 1901, to December 31, 1910, was $504,-

928,653, after making proper deductions for depreciation, and th the tangible property of the United States Steel Corporation o December 31, 1910, was $1,186,982,038. (Herbert Knox Smit Rept., pt. 1, pp. 280, 292, 310, 311.)

The allowance for depreciation by the United States Steel Corp ration itself is very much larger than that made by Mr. Smith, b he contends, with a good deal of force, that many of the items allowe by the United States Steel Corporation are not depreciation at al but arbitrary amounts cut off from the capitalization of subsidiar companies in order to correct the excessive sums at which the properties were carried on the books of the United States Ste Corporation. Assuming for the moment that Mr. Smith is su stantially correct as to the question of depreciation, let us see how h figures of actual value of tangible property agree with the valuatio placed upon the United States Steel Corporation by the investin public. The total capitalization and bonded indebtedness of th United States Steel Corporation on December 31, 1910, was follows:

Common stock	$508, 302, 5
Preferred stock	360, 281, 1
Bonds and purchase money obligations	599, 449, 6
	1, 468, 033, 2

Herbert Knox Smith Report, pt. 1, pp. 312, 324.
(U. S. Steel Corporation Rpt. for 1910, opposite p. 32.)

The average price of the preferred stock for the year 1910 was $11 and of the common stock $76.75. Applying these values to th capitalization, the account would stand as follows:

Bonds and purchase money obligations	$599, 449, 660.
$360,281,100 preferred stock at 117	422, 428, 887.
$508,302,500 common stock at 76¾	389, 922, 168.
	1, 411, 800, 715.

Mr. Herbert Knox Smith, on arriving at his value of $1,186,982,03 fixes the value of the iron ore at $134,145,450. If we substitute f this the estimate of the Minnesota Tax Commission for the Minnesot ores and the estimate of Mr. Finlay, acting for the Michigan Ta Commission, for the ores in Michigan, Mr. Smith's figures would increased as follows:

Taxing officers' valuation of iron ore	$340, 505, 000.
Deduct Mr. Smith's valuation of iron ore	134, 145, 450.
And we would have a balance of	216, 359, 550.
To this add Mr. Smith's estimate	1, 186, 982, 038.
And we have	1, 403, 341, 588.
Value fixed by the investing public	1, 411, 800, 715.
Mr. Smith's valuation as corrected by taxing officers	1, 403, 341, 588.
Or a difference of only	8, 458, 127

It should be remembered that during 1910 the average price in the market of the securities of the United States Steel Corporation was the highest of any year during its existence. We are justified in the conclusion that the actual value of the United States Steel Corporation, at the close of 1910, was not far from $1,400,000,000, or about $68,000,000 less than its capitalization.

The United States Steel Corporation is the greatest industrial organization in the world. Its properties embrace 149 distinct manufacturing plants, 96 working mines, 78 coking plants, containing 23,947 beehive ovens, 1,172 by-products ovens, and 31 coal plants, not connected with coking operations. It owns 7 railroads besides 19 plant-facility roads, having altogether a total trackage, including branches, spurs, second tracks, siding, and lines operated under trackage rights, of 3,491 miles, with docks at Two Harbors and Conneaut, and 1,193 locomotives, and 46,334 cars. In addition to this property it owns 106 boats upon the Great Lakes, 110 river barges, and 2 ocean-going steamers.

In 1910 it had 218,435 employees and paid $174,955,139 in wages. It produced 25,245,816 tons of iron ore, 13,649,578 tons of coke, 4,850,000 tons of coal, not included in that made into coke, 11,645,510 tons of pig iron, 14,179,369 tons of ingots, 10,733,995 tons of finished steel, and 7,001,500 barrels of Portland cement.

THE BOND CONVERSION PLAN.

It will be noticed that the preferred stock of the United States Steel Corporation on December 31, 1910, was about $150,000,000 less than at the time of its organization. This was brought about by the conversion of $150,000,000 of preferred stock into bonds. The manner in which this was effected has been the subject of much criticism. The facts in regard to it are as follows:

In the spring of 1902 it became evident that the United States Steel Corporation required 40 to 50 million of dollars more money for its business purposes. Various schemes of obtaining this money were canvassed. The preferred stock of the United States Steel Corporation was then selling at about $90 a share, and under the law it could only be issued at par for money or its equivalent in property. Moreover, if it had been possible to do this, it would have been a most expensive way to raise the money, because the issuance of $50,000,000 in stock would have only produced $45,000,000 in cash, for which there would have been a perpetual interest charge of 7 per cent upon $50,000,000, in addition to the original loss of $5,000,000. The next method considered was that of issuing $50,000,000 of second-mortgage bonds. The reason that decided the company against this plan is substantially the same reason that ruled against the sale of preferred stock, namely, that if the preferred stock bearing 7 per cent interest only brought $90 per share it was believed that the bonds could only be sold at a considerable discount. It was final determined that the most economical and advantageous way was issue $250,000,000 face value of second-mortgage bonds and u these and their proceeds, first, in procuring the $50,000,000 cash an secondly, in purchasing and retiring $200,000,000 par value of tl outstanding 7 per cent cumulative preferred stock. The retiremen of this stock would save $14,000,000 per annum of the cumulati dividend charge, and this sum so saved would not only pay the intere upon the whole issue of new bonds, but would leave a surplus $1,500,000 per annum, which would be sufficient to provide a sink ing fund for the payment of the bonds at or before maturity, whic was fixed at 60 years, and leave besides $450,000 per annum in su plus applicable to common stock. In other words, the plan enable the corporation to procure the new capital without increasing i annual outgo for interest and cumulative preferred dividends and, i addition, furnish a sinking fund for the payment of the bonds an provide for the reduction of its capital stock, which would inu greatly to the benefit of the remaining preferred and all the commo stock.

The finance committee was of the opinion that the immediate effe of a proposition to withdraw from the market and retire 40 per ce of the corporation's preferred stock would be to appreciate the mark value of the preferred stock and that if such market value becam above par, or above the price at which the new second mortgage 5 p cent bonds might be quoted at, stockholders would refuse to make a even exchange and it would defeat the plan and prevent any subscri tion. It seemed to them that the only way the stock could be take up was by organizing a syndicate which would undertake to guarant absolutely the whole, or a large portion of the preferred stock an cash needed, and deposit the stock with some trustee and hold it unt the plan could be carried through. It was recognized that it woul be difficult to get men to do this because of the risk involved and th necessity for locking up so large a sum of money for a long period time. It was considered that it might take from a year to a year an a half to carry through such a plan with thousands of stockholde scattered all over the world. Men had to be found who would buy, furnish preferred stock under an agreement that would permit of i being locked up beyond their power to sell for a year and a half and was finally found impossible to secure a pledge of the entire $200,000 000 of preferred stock, but the best that could be done was to organi a syndicate which would agree to the following, namely, to purcha and lodge with J. P. Morgan & Co. $80,000,000 of preferred stoc agree to exchange all of this, or only 40 per cent of it, at the optio of the United States Steel Corporation, for second mortgage bond Third, take second mortgage bonds from the United States Ste

Corporation at par in exchange for $20,000,000 in cash. For this the United States Steel Corporation was to allow the syndicate 4 per cent commission on all the bonds it took, so that if the syndicate furnished the whole $100,000,000 the United States Steel Corporation would have paid the syndicate $4,000,000, of which J. P. Morgan & Co. would have received $800,000. The United States Steel Corporation reserved the right to offer to every preferred stockholder, in the corporation, the option to subscribe for these new bonds to the extent of 40 per cent of his preferred stock. This right the United States Steel Corporation exercised. If every preferred stockholder had exercised his option and taken 40 per cent of bonds in exchange for his stock, the syndicate would have only had $32,000,000 of its $80,000,000 of its preferred stock converted into bonds and would have been left with $48,000,000 of preferred stock on its hands, although it had bound itself to tie up this $80,000,000 of stock so it could not sell it for 18 months. For this risk the syndicate was given the right to receive a commission of 4 per cent on the bonds issued to preferred stockholders who were not members of the syndicate. This plan was adopted by the directors of the United States Steel Corporation in March, 1902, subject to the approval of the stockholders, at a special meeting to be held on May 19, 1902. The meeting was held as called and about four-fifths of the preferred and an equal amount of the common stock was represented. Of those present 99.83 per cent voted in favor of the bond-conversion scheme and seventeen one-hundredths of 1 per cent voted against it.

A suit was brought by the dissatisfied stockholders to enjoin the carrying out of this plan. A final judgment was rendered in the case by the Court of Errors and Appeals of the State of New Jersey on October 11, 1902, confirming the action of the corporation and dissolving the injunction.

This plan was never carried out in its entirety, only $200,000,000 of bonds were issued, $150,000,000 of which were used in retiring an equal amount of preferred stock at par and the remaining $50,000,000 in obtaining additional capital. It is difficult to see that anybody was injured by this plan. Indeed, it seems pretty clear that all of the stockholders were benefited. It is true that an addition of $50,000,000 was made to the securities which were prior to the common stock, but at the same time $50,000,000 was added to the assets so that the relative position of the common-stock holder was the same as before. Each preferred-stock holder had the option, if he chose, to change 40 per cent of his stock into a security bearing a less rate of interest which would be prior to the preferred stock and therefore theoretically, at least, a better security. If he did not exercise this option, it was because he believed the preferred stock was still an excellent security. The deduction of $1,500,000 in the annual charge for interest and preferred dividend requirements coupled with the use of $50,000,000 additional capital, could not have failed to be a benefit to every stockholder. It is claimed that the allowance to the syndicate, which finally amounted to $6,800,000, was unreasonable. But as the stockholders approved of it by an affirmative vote of over 99.75 per cent it is not obvious that the general public should be unduly concerned in regard to it. (Hearings Perkins, pp. 1490, 1509, 1510, 1511, 1512, 1513, 1537, 1538, 1560, 1561, 1562, 1563, 1564, 1565, 1592.)

ACQUISITION OF THE TENNESSEE COAL, IRON & RAILROAD CO.

VALUE OF PROPERTY.

No act of the United States Steel Corporation has aroused so much public interest and developed so general discussion as its acquisition of the capital stock of the Tennessee Coal, Iron & Railroad Co. during the panic of 1907. This controversy related to the value of the property, the methods and motives of the United States Steel Corporation in acquiring it, the fairness of the transaction, the extent to which this acquisition increased the control of the United States Steel Corporation over the iron-ore situation, and the propriety of the conduct of President Roosevelt in relation to the matter.

The property of the Tennessee Coal, Iron & Railroad Co. consisted of the Ensley Steel Works, at Ensley, Ala., including 100 acres of mill property, 6 blast furnaces, 1 Bessemer plant, 8 open-hearth furnaces, 1 blooming mill, 1 rail mill, and other auxiliary departments, also plate and merchant mills at Bessemer, and 10 blast furnaces at other points in the South. It also owned the capital stock of the Birmingham Southern Railroad Co., which had 31 miles of track, about 70 miles of yarding and siding, 35 locomotives, and 750 cars. But the main value of the property consisted in its large holdings of iron-ore and coal lands.

At the time of its acquisition by the United States Steel Corporation it had a bonded indebtedness of $14,226,000 and a capital stock of $29,742,170.

The valuation of the fixed property, according to its own books, after some slight adjustments made by the United States Steel Corporation, was as follows:

Plants and equipments	$15, 382, 233. 71
Real estate	26, 525, 143. 93
Birmingham & Southern Railroad Co	1, 442, 698. 11
Land and town sites	289, 063. 90
Potter Ore Co	398, 000. 00
Total	44, 037, 139. 65

In addition the company owed the following current obligations:

Past-due notes for borrowed money	$300, 000
Notes for borrowed money soon to mature	1, 334, 000
Accounts payable, largely past due	1, 370, 000
Accrued pay rolls	397, 000
Accrued interest and taxes	666, 000
	4, 167, 000

The United States Steel Corporation purchased the capital stock at par, paying for it in its second-mortgage bonds at their market price, which was then 84, so that the total face value of its bonds delivered for the stock amounted to $35,407,000. The total cost to the United States Steel Corporation, after a complete adjustment, was $48,961,208.83, as stated in the report of the United States Bureau of Corporations.

All the testimony agrees that the manufacturing plants were poorly constructed and very expensive in operation. Herbert Knox Smith regards the value of $15,382,234, placed upon the plants at the time they were acquired, as liberal.

Mr. D. H. Bacon, who had charge of the property from January 1, 1901, until May 1, 1906, as its chief executive officer, and nearly all the time as its president, says that the open-hearth plant was designed by a man who did not understand the making of open-hearth furnaces, and was a costly and inefficient machine, and that the real value of the property, up to the time that the syndicate bought it out, in the fall of 1905, was chiefly what was under ground, as there were few things on the surface that could do their work as cheaply as could be done by other properties in the North.

Mr. L. C. Hanna, who became interested in the property in the fall of 1905, says that the plant was in such condition that you could not figure on what its capacity was, because it was continually breaking down.

Mr. Earl W. Oglebay, who became interested in the property at the same time with Mr. L. C. Hanna, also speaks frankly of its bad condition.

There seems to be no dispute as to the poor character of the manufacturing plant. This was so evident that when the "syndicate," hereafter to be mentioned, acquired the control of the property, in the fall of 1905, they began the expenditure of large sums of money in rehabilitating and rebuilding it, and up to the time of its acquisition by the United States Steel Corporation, in 1907, they had expended about $7,000,000, and the work was incomplete.

Mr. Bacon estimated that it would take $25,000,000 to rehabilitate the property and put it on a paying basis, and the syndicate had spent about one-fourth of this sum at the time the property was purchased by the United States Steel Corporation.

IRON ORE QUANTITY.

The iron ore owned by the Tennessee Coal, Iron & Railroad Co. was of two kinds, generally designated as "red ore" and "brown ore." The red ores constituted the great bulk of its holdings. The brown ores occur in pockets of uncertain size, and the total amount is difficult to estimate. They are all higher grade than the red ores, running about 45 per cent in metallic iron, but they are irregular in place and amount, and this renders them of far less importance from the industrial standpoint than the red ores.

The red ores in the Birmingham district lie in a vein or sheet at an incline of about 30 per cent from the horizontal, outcropping on Red Mountain for a distance of about 15 miles and sloping from there under Shades Valley to the foot of Shades Mountain and probably beyond. The veins are very regular in thickness, though a little broken by faulting in the lower part of Shades Valley. In certain portions the vein is separated into an upper and a lower vein by a thin stratum of slate. The upper vein is the richer in metallic iron, and in some cases only the upper vein is mined.

During the time that Mr. Bacon was president of the company an attempt was made to consolidate the Tennessee Coal, Iron & Railroad Co. with the Schloss-Sheffield Coal & Iron Co. and the Republic Iron & Steel Co., and these companies selected a number of engineers to estimate the amount of coal and ore belonging to each company. Among these engineers were Mr. Perin and Mr. Given, who both appeared as witnesses before the committee. That estimate appears upon pages 1034 to 1040 of the hearings. It shows that the tonnage of the red ore belonging to the Tennessee Coal, Iron & Railroad Co., as estimated, was 402,621,500 tons. To this should be added 10,177,000 tons of brown ore, making a total of 412,798,500 tons. The brown ore, with the exception of a small amount, is estimated to run from 45 per cent to 50 per cent in metallic iron. Of the red ores, 250,000 tons are estimated at 45 per cent in metallic iron; 21,591,800 tons are estimated at 30 per cent metallic iron; and of the remainder—nearly nineteen-twentieths of the whole amount—at from 36 per cent to 37 per cent in metallic iron.

The practical men connected with the company did not place a very high value upon this estimate for accuracy, although all admit it had some value.

Mr. Gates says: "I do not think anyone could testify correctly today as to the amount of ore owned by the Tennessee Coal, Iron & Railroad Co."

Mr. Hanna says, speaking of this estimate, that the engineers did not take time enough to make a careful estimate, but that the estimate was not all guesswork and it was of some value.

Mr. Bacon estimated the ore owned by the Tennessee Coal, Iron & Railroad Co. at 400,000,000 tons.

Mr. Gayley estimates it at 440,000,000 tons.

Mr. Gates says: "We always estimated that we had not less than 300,000,000 tons, and we might have 500,000,000 to 700,000,000 tons."

Judge Gary, speaking on this subject, says: "I would not be at all surprised if we have six or seven hundred million tons *of all kinds,* but they have always taken off the top of the ore and left the bottom of it and are still doing so. How much of the ore is usable at the present time I do not know, but I believe 200,000,000 tons; but it will take a good while to use that."

Mr. Perin, speaking of the estimate made by the engineers at the time of the contemplated consolidation with the Republic Iron & Steel Co. and the Schloss-Sheffield Co., said that in fixing the amount of available ore they made some allowance for improvements in manufacturing methods which would bring lower grade material into the market.

A more careful estimate was made by the United States Steel Corporation after it acquired possession of the property. Its estimate is as follows:

	Reasonably assured (including tonnage already developed).	Additional probable tonnage.	Total.
Red ores	175,600,000	279,600,000	455,200,000
Brown ores		3,150,000	3,150,000
Red ore of lower grade, but which may be of future value.	204,000,000	35,000,000	239,000,000
Total	379,600,000	317,750,000	697,350,000

This table reduces the actual tonnage, now available, to 175,600,000 tons, but adds to this a probable tonnage of 279,600,000 tons, which would make a total probable tonnage of 455,200,000 tons. Taking all of these estimates together it would seem that an actual tonnage of available ore of 400,000,000 tons was a very liberal estimate.

IRON ORE VALUE.

As to the value of the iron ore in the ground, Mr. John A. Topping, who became the chief executive officer of the company upon the resignation of Mr. Bacon, May 1, 1906, says that during the last five years he purchased a body of iron ore for the joint account of the Republic Iron & Steel Co. and the Tennessee Coal, Iron & Railroad Co. known as the Potter group of mines "which we satisfied ourselves contained over 70,000,000 tons of ore, at a cost of $800,000." This would amount to one and one-seventh cents per ton.

Mr. Grasty, who represented some capitalists that owned a considerable body of gray ore, and needed some red ore to mix with it, says that his people were ready to pay from 2 to 3 cents a ton, but he found no ore satisfactory to him and made no offers.

Mr. Bacon referring to this testimony of Mr. Grasty, says that this is more than anybody had paid up to this time, so far as he knew.

There was some testimony from Mr. Perin to the effect that royalties on iron ore were paid as high as 25 to 30 cents a ton. But Mr. Perin expressly states that it would be unfair to take the royalties as a fair basis of the valuation of the ore in the ground, because the royalty is paid over a considerable period of time, as the ore is taken out. In other words, a dollar in the hand is worth more than a dollar 50 years from now.

It is apparent that the value of a large body of ore, containing some hundred million tons, would depend very largely on how soon it could be utilized, but in the case at hand a very little figuring will show how absurd the royalty basis would be for determining the value of such a body of ore as that owned by the Tennessee Coal, Iron & Railroad Co. Assuming that the estimate of 400,000,000 tons is correct, its value at 25 cents a ton would be $100,000,000. The Tennessee Coal, Iron & Railroad Co. bonds bore 6 per cent interest and this would make an interest charge of $6,000,000 a year. The company was mining at the time of its acquisition by the United States Steel Corporation about 1,500,000 tons per annum, and the interest charge alone on this amount of ore would be $4 a ton, a figure which is, of course, prohibitive, not to say absurd. If, however, we take the figure paid for the Potter property and apply it to the 400,000,000 tons, we would have a little over $4,700,000 as the value of the ore, or applying the value of 2½ cents a ton, which Mr. Topping said was the amount he estimated for the value of ore in the ground, when figuring the cost of making pig iron, we would have $10,000,000 as the value of the ore. Certainly the latter is an outside figure, much more than anybody has paid of recent years. The interest charge at 5 per cent on this latter amount would be 25 cents a ton on an annual output of 2,000,000 tons, and it would be far better economy to lease the ore at a royalty of 25 cents a ton than to buy so large a body at 2½ cents a ton, where the output was so restricted, as in this instance.

COAL.

The coal holdings were estimated by Mr. Bacon at 1,000,000,000 tons. Mr. Gary estimates the total coal holdings from a billion to a billion two hundred million tons, and the Perin-Aldrich report at 1,621,639,500 tons.

While the men who made the Perin-Aldrich report seem to have been competent engineers, it must not be forgotten that the purpose of their estimate was to form the basis of a consolidation of the Tennessee Coal, Iron & Railroad Co. and the Schloss-Sheffield Iron & Steel Co. and the Republic Iron & Steel Co., and that their attention was chiefly directed to the question of relative value between the three companies. It is also well to remember that overcapitalization was the order of the day and that low valuations did not sound well in a prospectus. Their estimates were undoubtedly liberal.

The careful estimate made by the United States Steel Corporation, after it had obtained the property, arranged the tonnage under three heads, "Proven," "Probable," and "Possible," and gives the following figures:

	Tons.
Proven	285, 000, 000
Probable	441, 800, 000
Possible	670, 500, 000

Just what value should be given as a basis for capitalization and the sale of securities to a trusting public to this 670,500,000 tons of "possible" coal is left to the candid reader. It would seem evident that a billion tons of known available coal was a liberal estimate.

The hearings do not contain any very definite information on which to base an accurate estimate of the value of coal in the ground at Birmingham. There is no testimony as to recent sales, as in the case of the Potter iron ore mines. Mr. Given fixes the royalty valuations on the coal as from 3 to 10 cents a ton, according to location, quality, thickness of vein, etc. He places a royalty of 10 cents a ton only on the Pratt vein. Assuming that about 6 cents is the average royalty, we are in position to compare this with the cost under a cash payment for the entire body of coal. It is clear that the number of years it will take to exhaust the coal is a very important point in this problem. In 1907 the Tennessee Coal, Iron & Railroad Co. produced 1,709,251 tons of coal, not including that used for coke. It also produced 1,170,826 tons of coke. Assuming that 100 pounds of coal will make 59 pounds of coke, which is a fair estimate for this district, according to Mr. Burchard, of the United States Geological Survey, this would amount to a production of 1,981,061 tons of coal used for coke, or a production altogether of 3,609,312 tons of coal.

The Tennessee Coal, Iron & Railroad Co. owns a very small proportion of the coal in the entire district. According to Mr. Bacon not over a tenth, and perhaps much less than a twentieth. The entire production of the district is about 16,000,000 tons a year, 6,000,000 tons of which is produced by operators not in any way connected with any of the iron and steel companies, so that a great increase in the production of coal for sale on the part of the Tennessee

Coal, Iron & Railroad Co. can not be expected. In order to be entirely safe let us assume that the annual production of the Tennessee Coal, Iron & Railroad Co. will be 7,500,000 tons of coal per annum, considerably more than twice its production in 1907. The annual interest charge for the original investment would have to be borne by the production for that year. Assuming that the value of this body of 1,000,000,000 tons of coal was $10,000,000, this would amount to 1 cent a ton for the coal in the ground. The interest charge on that amount at 5 per cent would be $500,000, which would amount to a little over 6 cents a ton on an annual production of 7,500,000 tons. Adding to this 6 cents 1 cent a ton purchase price, we would have 7 cents a ton to compare with a royalty of from 3 to 10 cents a ton. While this calculation can make no claim to accuracy, it is at least sufficient to say that an estimate of $10,000,000 for this entire body of coal is, as Mr. Herbert Knox Smith phrases it, liberal.

The acreage of the entire iron ore, coal, and limestone property of the company at the time of its acquisition was as follows:

[U. S. Steel Corporation Annual Report for 1907, p. 26.]

In the State of—	Surface and mineral rights.	Acres owned in fee.		Total acres owned.
		Mineral rights only.	Surface only.	
Alabama	165,096	170,152	5,015	340,263
Tennessee	98,842	6,898	....	105,740
Georgia	1,053	367	....	1,420
Total	264,991	177,417	5,015	447,423

It will be seen by this table that while the company owns 442,408 acres of mineral lands it owns the surface to only 270,006 acres.

Something of course should be added to the valuation of the coal and the iron ore for these surface rights, but as many of them can not be utilized for fear they will interfere with mining operations or that improvements will be made upon them which it would be necessary to pay for later when the surface is needed for mining operations or the ground caved this fact will greatly depreciate their value.

While the figures gathered by the committee are not sufficient to enable them to set a definite value on the properties, it is at least certain that the value fixed in the statement of the company itself of $26,525,000 seems reasonably high. (Herbert Knox Smith Rept., pp. 256, 257, 258, 290, 291; Hearings, Gary, pp. 143, 125, 150; Bacon, pp. 5325, 5326, 5346, 5347, 5345, 5329, 5330, 5331, 5349, 5328, 5360, 5333; Hanna, pp. 860, 862, 871; Oglebay, pp. 921, 922; Gates, pp. 8, 6, 7; Aldrich-Perin Rept., pp. 1038, 1036; Gayley, p. 401; Topping, p. 1256; Grasty, p. 5306; Perin, pp. 987, 974, 1017; Given, pp. 1004 to 1015; Moore, p. 1027; Bulletin No. 400, U. S. Geological Survey, p. 183; U. S. Steel Corporation Rept., 1907, p. 26.)

ADVANTAGES OF BIRMINGHAM FOR THE PRODUCTION OF IRON AND STEEL.

It is generally conceded that there is no place in the United States where the materials for making pig iron, namely, iron ore, coke, and limestone, can be so cheaply assembled as in the Birmingham district, and that this fact offsets the low mineral contents in the ore and adds immensely to the value of the raw materials.

This would be true if the figure for the cost of manufacture in the Birmingham district were as low as claimed and there was a market for the product near at home. Unfortunately, however, neither of these things is true, and the great bulk of the products of this district have to be sold in the northern market, where the extra freight rate entirely offsets the lower cost of production.

There is inserted in the record an estimate by a Mr. Phillips, a mining engineer, at one time in the employ of the Tennessee Coal, Iron & Railroad Co., of the average cost of making pig iron at Birmingham. This table is as follows:

The following average costs of manufacture of pig iron in 1904–1906:

	1894	1895	1896		1894	1895	1896
Ore	1.86	1.754	1.716	Current expenses	0.181	0.200	0.200
Limestone	.16	.240	.128	General expenses	.077	.070	.093
Coke	2.78	2.840	2.735	Relining	.170	.183	.200
				Taxes	.026	.025	.080
Total for materials	4.800	4.834	4.579	Insurance	.003	.005	.006
				Bad debts	.037	.033	.030
Materials	4.800	4.834	4.575				
Labor	.835	.998	.966		6.457	6.650	6.464
Supplies	.338	.302	.314				

The lowest cost during 1904 was $5.71, the highest was $7.81, and the average selling price of No. 2 foundry iron was $7.20.

The lowest cost during 1895 was $5.84, the highest $7.02, and the average selling price of No. 2 foundry iron was $7.15.

The lowest cost during 1896 was $5.74, the highest $6.84, and the average selling price of No. 2 foundry iron was $7.22.

Mr. Perin, speaking of figures similar to this table, says: "There has been no more monumental example of bad accounting than has been exhibited in the case of pig iron south of the Ohio River." This was in reply to the following question by Mr. Young: "Have not the southern iron and steel men continually fooled themselves as to what their actual cost was?" Mr. Perin then goes on to state an instance of a furnace in which to his knowledge there was an actual depreciation cost of a dollar a ton.

Again he says: "My own opinion is that the cost keeping of the blast furnaces of our country has been radically wrong. We have never allowed a sufficient amount from the amount of the destruction of the property, either the coal or iron-ore property, nor have we made proper allowance for renewals or replacement of the plant."

It must be remembered also that 1894, 1895, and 1896 were year of abnormally low costs and prices. Mr. Perin, speaking directly o the figures of Mr. Phillips, says: "I do not think there is anybod to-day who could come within $3 of that cost."

Mr. William M. Given, mining engineer, living at Birmingham, says "There was no value to labor in 1895 * * * that was the basi of iron making in those days from 1892 to 1898, and that can not b considered in a comparison at all. They were impossible conditions which will never exist there again. * * * The price of labor i 1895 was whatever you wanted to give that labor. * * * I sa men in Virginia whom I had paid $3 a day in 1891—in 1893 I hav seen them come to my house and ask me for food, and I have gon with them to the store and given them a sack of flour, and they wer glad to get 90-cents-a-day jobs."

Mr. Bacon, speaking of the years from 1901 to 1906, says that thos were years of low prices and low cost, but that in the old furnaces o the Tennessee Coal, Iron & Railroad Co. the cost of making pig iro was between ten and eleven dollars a ton, and that in the one new modern furnace of the plant their cost was between seven and eigh dollars a ton—say under $8.

As the Tennessee Coal, Iron & Railroad Co. at that time wa making a large proportion of the pig iron in the Birmingham distric and as the cost at their best furnace was a little under $8 and in thei other furnaces between ten and eleven dollars a ton, it can easily b seen that Mr. Phillips's "average cost" of about $6.50 per ton was pure figment of the imagination. The cost to the Tennessee Coal Iron & Railroad Co. for making pig iron for the year 1907, the las year it worked before its acquisition by the United States Steel Corporation, was, according to its books, $11.02 per ton.

The United States Commissioner of Corporations in his report o the Steel Corporation, part 2, page 52, shows that the average cos of making pig iron from Lake Superior ores was $11.82 per ton.

If these figures are to be relied on, and they are the best availabl it will be seen that the actual difference in the cost in manufacturin pig iron between the Tennessee Coal, Iron & Railroad Co. and th northern companies at the present time is less than a dollar a ton. I is true that Mr. Perin says, speaking of the Birmingham and Pittsburgh districts: "Based on to-day's selling price, which I presum would be a fair approximation of their cost prices, there is nearly $ difference between the cost of production between the two districts. And a little later he admits that on arriving at this difference he ha not made a proper charge for depreciation of ore nor a proper allowance for depreciation of the plant at Birmingham.

Unquestionably, however, the cost of manufacturing pig iron a Birmingham is less than in any large northern district; but this, a stated before, is entirely offset by the increased cost of getting the product to the market.

Speaking on this subject, Mr. Bacon says that while he was in charge of the plant their pig iron was sold a good deal at Cincinnati, sometimes in Detroit and St. Louis, some in New England and different points between, and some at Philadelphia. That a very small tonnage indeed was sold in the South—the consumption in the South was almost "nil."

Mr. John M. Topping, who succeeded Mr. Bacon in charge of this company, says that 60 to 75 per cent of the pig iron went north of the Ohio River.

Mr. Hanna says that the market for pig iron is largely in the North. He adds: "I think it will be very many years to come before the value per ton of ore will be the same in the South as in the North. In the first place, there is not the demand, and I question whether there will be."

Judge Gary also refers to the want of market for the southern iron in the South as depreciating the value of the property.

Mr. Perin also, in speaking of the Tennessee Coal, Iron & Railroad Co., says: "But it is a property which requires a great capital to develop, a high type of technical skill to get the best results from it, and the country immediately in the neighborhood has got to develop so as to give the great advantages to this district which it would naturally have were there a market near at hand, because if you have to add $3 or $4 a ton on every ton that goes out, you take away the distinct advantages which this district has."

Again he says that if the production of pig iron is much increased in the South the bulk of it will have to be marketed in the North.

No company at Birmingham, except the Tennessee Coal, Iron & Railroad Co. has made any attempt to manufacture steel, and the books of the Tennessee Coal, Iron & Railroad Co. show that up to the time of its acquisition by the United States Steel Corporation its attempt had not been a financial success, with some few exceptions. In 1907 the average price for which it sold its rails was $28.76 per ton; the cost was $29.48 per ton. The selling price for billets was $33.27 and the cost was $24.67 per ton, but it sold only 2,496 tons. It sold 17,000 and odd tons of bars; the selling price was $37.97, and the cost $36.42 per ton. Of plates it sold 15,000 tons; the selling price was $40.08, and the cost was $38.13. Its pig iron cost was $11.02 and the selling price $16.49. This was a boom year in the iron and steel business, but the profits of the company were practically confined to pig iron.

THE COMPANY HAD NEVER BEEN A FINANCIAL SUCCESS

It had been in operation for many years. Mr. Bacon states that during his administration the company did not improve its plants because it did not have the money; that it could not do it out o its profits, because they were so small. He states that it paid three quarterly dividends at the rate of 6 per cent annually in the nine months previous to the purchase of the control of its stock by the so-called syndicate, but that the new people who took charge immediately stopped the dividends. Again he says, "It was not a profitable business while I was president." And again he says that if he had charged up the proper amount to depreciation there would not have been a dollar of profits from which to pay dividends. He expresses the opinion that while the syndicate people were in control the company was not on a profitable basis, although they paid 4 per cent dividends for a little while. He adds that their improvements had not been completed and that the price of products was low during that period.

Mr. Perin, being asked if at the time of the making of the Perin-Aldrich report (which appears on page 1034 of the hearings) the Tennessee Coal, Iron & Railroad Co. was not making strenuous efforts to get more money to develop the property, replies, "I never knew them when they were not in that condition," previous to the control by the syndicate. And he admits that a dividend of 4 per cent was an entirely inadequate return for an investment in so hazardous an enterprise.

During the three years immediately preceding the acquisition of the company by the United States Steel Corporation, its earnings, as shown on its books, equaled 4.8 per cent on the investment, and in the three years and two months from November, 1907, to January 1, 1911, during which time it has been controlled by the United States Steel Corporation, its net earnings, on its common stock, amounted to $4,068,753, equal to an average of 4 per cent per annum on its common stock and 3.4 per cent on the United States Steel Corporation's investment in the stock. During the year 1907 its net earnings, as appeared from the statement of the books of the United States Steel Corporation, were $1,426,864.

During the time that Mr. Bacon was in charge of the property he made an estimate that it would take $25,000,000 to rehabilitate the property and put it on a paying basis. He says: "There was scarcely any of the property that was right, if it was possible for it to be wrong. I think the stock was selling at that time for about $50." That would be about $11,000,000 for the stock and the bonds, I think, were about $12,000,000. A little later he says that Mr. Gates began buying the stock at $55 and run it up to a little over $100.

In the statement that it was Mr. Gates who began buying the stock, Mr. Bacon is probably wrong, as the testimony shows that it was Mr. Kessler who began buying up the stock. If Mr. Kessler was connected with Mr. Gates in this operation, the testimony does not disclose it. (Hearings, p. 883; Phillips, p. 985; Perin, pp. 1030, 1031, 994, 984, 983, 1033, 985, 996, 995; Given, p. 1012; Bacon, pp. 5332, 5333, 5334, 5343, 5344, 5345, 5346; Gary, pp. 145, 146, 144; Topping, pp. 1233, 1257; Hanna, p. 874; Herbert Knox Smith Rept., pt. 2, p. 52.)

CIRCUMSTANCES SURROUNDING THE PURCHASE OF THE TENNESSEE COAL, IRON & RAILROAD CO. BY THE UNITED STATES STEEL CORPORATION.

In November, 1905, Mr. George W. Kessler, a wealthy wine merchant of the city of New York, had accumulated a large amount of the Tennessee Coal, Iron & Railroad Co. stock. Whether he approached Mr. Grant B. Schley, of the firm of Moore & Schley, or Mr. Schley approached him in regard to the matter, does not appear, but at all events Mr. Schley learned that a large amount of Tennessee Coal, Iron & Railroad Co. stock could be acquired from Mr. Kessler. This led to a conference between Mr. Schley, Mr. Guthrie, who was then president of the Republic Iron & Steel Co., and Mr. L. C. Hanna, of Cleveland. These gentlemen a little later met Mr. Kessler, who informed them of the number of shares he had in his possession, and an arrangement was made to purchase the control of the Tennessee Coal, Iron & Railroad Co. At this time the stock was selling in the market in the eighties and nineties. Other gentlemen were enlisted in the enterprise. The stock was bought by each separately. The amount of stock purchased at that time was 118,300 shares.

On the 27th of November, 1905, a syndicate agreement was entered into, which is set out upon page 917 of the hearings. By the terms of this agreement the syndicate managers, Messrs. Grant B. Schley and Charles S. Guthrie, were given full control over the stock belonging to the members of the syndicate, with the power to pledge it or sell it.

Mr. Guthrie soon died, and Mr. L. C. Hanna, of Cleveland, was substituted in his place as one of the syndicate managers. The members of the syndicate and the amount of syndicated stock owned by each appears in the following table:

	Shares.		Shares.
O. H. Payne	10,300	E. W. Oglebay	5,150
L. C. Hanna	10,300	H. S. Black	5,150
G. B. Schley	10,300	F. D. Stout	5,150
J. B. Duke	10,300	J. W. Simpson	5,150
E. J. Berwind	10,300	G. W. French	2,500
J. W. Gates	10,300	S. G. Cooper	1,500
A. N. Brady	10,300	J. A. Topping	1,000
G. A. Kessler	10,300		
O. Thorne	10,300	Total	118,300

At this time the total stock of the Tennessee Coal, Iron & Railroa Co. was about $22,500,000, divided into 225,000 shares, so that 118,3 shares was sufficient to carry the control.

Of this amount, 82,000 shares was bought by the syndicate directl from Mr. George W. Kessler at a price of $110 per share, and t 36,300 additional to make up the 118,300 shares was purchased up the street the next day at an average price of a little less then $11 a share.

It is certainly a remarkable circumstance that this large purchase stock in the open market did not raise the price of the stock as hig as the amount paid to Mr. Kessler at private sale. The reason f purchasing the Kessler stock, undoubtedly, was because it woul have been very difficult for the syndicate to obtain the control of t company with Kessler's stock against them.

A little later a second syndicate was formed, embracing some of t parties who were in the first syndicate and some additional men, t take 50,000 additional shares of the stock on the street.

There is printed in the hearings a second agreement bearing t date of August 27, 1906, headed ''Tennessee Coal, Iron & Railroa Co., stock syndicate agreement No. 2.'' This agreement is simil to the first; is for the acquisition of 40,000 shares; appoints Messr Grant B. Schley and Leonard C. Hanna managers, and is to run unt February 7, 1907. It refers to another syndicate agreement bea ing date February 7, 1906. As the original syndicate agreeme bore date November 27, 1905, it would appear that there had bee an intermediate agreement bearing date February 7, 1906. Th may account for the discrepancy in the number of shares which fixed in this agreement at 40,000 and Mr. Schley's statement th it embraced 50,000 shares. Fifty thousand shares may have bee the total under the agreement of February 7, 1906, and the o of August 27, 1906. Each of these agreements states that its pu pose is the acquiring and disposing of, or distributing capital stock o the Tennessee Coal, Iron & Railroad Co.

The parties to the first agreement, who were sworn as witness before the committee, vigorously denied that any stock-jobbing oper tion was intended, but claimed that the real purpose was to develo improve, and keep the property. These agreements themselve however, contain internal evidence that there was also in the min of the members of the syndicate, from the beginning, the probabilit of selling the property on such terms as the syndicate manage might determine. The price paid for this second syndicate stoc was either 120 or 130. Neither Schley nor Kessler were parties t this second syndicate, but the stock was bought from them, Kessl furnishing about 45,000 shares and Schley about 5,000 shares.

In the meantime, in order to obtain money for improvements, the capital of the company had been increased and new stock issued at par to an amount which brought the capital stock up to 297,600 shares at the time of its acquisition by the United States Steel Corporation. This stock was all taken by the stockholders proportionately to their former holdings.

No sooner was the second syndicate formed, apparently, and the 50,000 shares of stock disposed of than Kessler and Schley began buying more stock. *Schley made these purchases to sustain the market.* (Schley, hearings, p. 1059.)

The situation of stock ownership at the time of the panic was:

	Shares.
First syndicate	118, 300
Second syndicate	50, 000
First syndicate, new stock, first call	17, 750
First syndicate, new stock, second call	19, 441
In addition to this Mr. Schley owned outside the syndicate about	25, 000
Mr. Kessler	28, 000
Making a total of	258, 491

In addition to this Mr. Kessler had five or six accounts with different brokers in which he carried Tennessee Coal, Iron & Railroad Co. stock, but the exact amount of which is not stated in the testimony.

The second syndicate took its proportion of the new stock, but whether this embraced two calls or only the last call is uncertain. If it was only the last call it would be about 7,500 shares, which, added to the above amount, gives a total of 265,991 shares. It is entirely safe to say, then, that not to exceed 30,000 shares of the capital stock was owned outside of the two syndicates and Schley and Kessler personally. Of this entire stock issue practically 150,000 shares was in the assets of Moore & Schley. That firm had loaned to their customers upon it and had rehypothecated from 100,000 to 105,000 shares thereof. When the panic came on Moore & Schley owed about $38,000,000. Nearly all this amount was due and their condition was becoming precarious. Of this amount about $1,500,000 or $2,000,000 was borrowed of Morgan & Co. and over $2,000,000 from the First National Bank of New York; and scattered through the collateral for a large number of these loans was about 100,000 shares of Tennessee Coal, Iron & Railroad Co. stock, together with a large amount of other industrial stocks, like Tobacco common and Republic Iron & Steel common. When the financial situation became disturbed there was a general tightening up of the banks as to the character of collateral, and the banks quite generally began to object to Tennessee Coal, Iron & Railroad Co. stock and other stocks of like character as collateral and asked for substitution of other stocks. There was no difference in the treatment by the banks of the Tennessee Coal, Iron & Railroad Co. stock and other stocks c similar character. (Schley, hearings, pp. 1051, 1065.)

Mr. Hanna says for a long time there had been no market for Tennessee Coal, Iron & Railroad Co. stock. It was quoted from 120 t 130 on the market, but these quotations were absolutely nominal Sometimes a month or two months would go by without a singl transaction, and it was selling high considering the earning power o dividend rate. He also says that as a going proposition it was no worth what the syndicate paid for the stock, but he thought it was looking to the future. That commercially he thinks it was worth wha the United States Steel Corporation paid for it, but whether it wa worth it under the conditions as existed at that time was a subjec for argument. (Hanna, hearings, pp. 862, 863, 872.)

Further speaking of the stock, he said: "In the first place, th stock is what is termed in the street as pegged stock, from the fac that a large majority of the stock was under a syndicate agreemen for a specified time. I think any stock occupying that positio might be, on the part of the bankers, considered what you term a contraband stock. I think that in its general terms it was such a stock, a stock of the character of the Tennessee. The company wa in process of further development. It had been a football in th Street for many years and had not very many friends. The legitimate side of the company had not kept pace with the pace of th steel industry of the country. The property was not very wel regarded, except under abnormally prosperous conditions of the stee industry. Then they always managed to get the price of it marke well up. I think that, too, with its past experience and the fac that it had been a football in the Street for many years preceding, i was still tinctured, even under the new control, with its old reputation to some extent. There was absolutely no market for it." Mr Hanna adds, "My judgment is if I had gone on the market with a thousand shares of stock and forced it, I would have broken th market from 10 to 20 points. Wall Street always shied at a stock in that position. One hundred and twenty to 130 was a high pric for a stock that only paid 4 per cent."

Mr. Schley says that Tennessee Coal, Iron & Railroad Co. stock was not acceptable to the banks in 1906 or 1907. It was in a ver bad way as to market prices, and there is no bank that will loan o a stock that has no market. He adds that there was nobody buying or selling Tennessee Coal, Iron & Railroad Co. stock.

The stock was regarded as a pegged or pooled stock, with onl nominal quotations, without any real transactions, and the bank could not realize on it in time of panic.

The record is full of testimony of this character, and there is n contradictory evidence.

In the meantime financial matters had got to a crucial condition. Banks had failed, and the banks of New York City had been compelled to resort to clearing-house certificates, and the panic was of a most acute character.

Col. Oliver H. Payne, one of the syndicate, who was a warm friend of Mr. Schley, loaned Mr. Schley, for the use of Moore & Schley, from $6,000,000 to $8,000,000 of standard securities to use in supporting their loans, taking as security therefor uncurrent securities of Moore & Schley. This loan was subsequently changed into an absolute exchange, Moore & Schley becoming the owners of the standard securities and Mr. Payne becoming the owner of the uncurrent securities.

Mr. Payne, becoming alarmed at the situation, urged Mr. Schley to dispose of his Tennessee Coal, Iron & Railroad Co. stock as the only possible means of relief. This urging on the part of Col. Payne continued for about a month. He suggested that Moore & Schley should call in the assistance of Mr. Lewis Cass Ledyard, a distinguished lawyer in the city of New York. At Col. Payne's solicitation Mr. Schley finally sent for Mr. Ledyard, and asked him to go and see Mr. J. P. Morgan to try to sell him the stock for the United States Steel Corporation. To this Mr. Schley consented. (Schley, hearings, pp. 1081, 1078, 1079.)

Mr. Ledyard testified that in the last week of October, 1907, Col. Payne informed him that Moore & Schley were largely indebted to him and that he was much concerned over their condition and laid the condition before Mr. Ledyard. He stated that he saw no way to save Moore & Schley unless they could sell their Tennessee Coal, Iron & Railroad Co. stock, and that there was no market for it unless the United States Steel Corporation could be induced to purchase it, and said he would suggest to Mr. Schley that Mr. Ledyard be asked to see Mr. Morgan and get him to lay the proposition before the corporation. This was done, and Mr. Schley sent for Mr. Ledyard on Friday night, the 31st of October, 1907. At this interview Mr. Ledyard familiarized himself with the situation and at Mr. Schley's request went to see Mr. Morgan the next day and laid the situation before him. Mr. Morgan expressed the greatest concern and said that it was the most serious thing that had been brought to his attention in connection with the panic. He said that if Moore & Schley should go there was no telling what the effect on the financial institutions of New York would be and how many other houses would be involved in the consequences. He telephoned both Judge Gary and Mr. Frick; and Mr. Morgan, when they came, told each of them in Mr. Ledyard's presence of Moore & Schley's situation and the proposition to sell to the United States Steel Corporation. The conferences on the subject continued through Saturday and Sunday, at some of which Mr. Ledyard was present. Judge Gary expressed great reluctance to buy the stock, saying it was not worth over $60 or $65 per share at the outside. Mr. Ledyard replied that he thought it likely, if they waited long enough, they could get the stock for $25 a share, but suggested that when that time came the United States Steel Corporation would not be in condition to buy anything at any price. Mr. Frick objected to the trade unless it were arranged, at the same time, that the bankers should save the threatened trust companies. Judge Gary was still reluctant to purchase and offered to loan Moore & Schley $5,000,000. This proposition was submitted to Mr. Schley and rejected by him. He said it would be perfectly useless; that it would not pull him out and would not be effective.

Before closing the trade either Mr. Morgan or Judge Gary requested that Moore & Schley's books should be examined to see if their situation was as bad as represented, and this was done by experts.

Judge Gary said to Mr. Morgan, during one of these conferences, that he would not think of considering the purchase of this stock without going to Washington first and taking the matter up with the President or the Department of Justice, or both. Mr. Morgan said, "Why? Have they any right to say whether we buy or not?" Judge Gary said, "No, they have not. But there is a financial crisis, and from your standpoint the object of buying this stock is to assist in overcoming this panic, and if the Department of Justice or the President should find out we had purchased or were about to purchase it and should enjoin us from purchasing, on the ground that it would add to our holdings, and thereby raise the question of creating or adding to a monopoly, you can see at once that what we had done would be to make the financial conditions very much worse than now; and therefore it seems to me we ought to know how the President and the Department of Justice would feel about the question." Mr. Morgan said, "Well, I think that is very forcible, and I see no objection to your going over there if you feel like it." (Gary, hearings, p. 130.)

So Messrs. Frick and Gary came to Washington to see President Roosevelt. Both Judge Gary and ex-President Roosevelt gave an account before the committee of what occurred at that interview. Judge Gary says that Mr. Frick and himself stated the case to the President, who said he would like to consult the Attorney General, Mr. Bonaparte. But Mr. Bonaparte was out of the city, and so the President requested the presence of Secretary Root, who came, and at the President's request Judge Gary restated the case in Mr. Root's presence. In order that an accurate record might be kept of what had occurred Judge Gary wrote the following letter to Secretary Root, and the correspondence following it occurred:

NOVEMBER 7, 1907.

MY DEAR MR. SECRETARY: At the recent interview at the White House between the President, yourself, Mr. Frick, and myself I stated, in substance, that our corporation had the opportunity of acquiring more than one-half of the capital stock of the Tennessee Coal, Iron & Railroad Co. at a price somewhat in excess of what we believed to be its real value, and that it had been represented that if the purchase should be made it would be of great benefit to financial conditions and would probaby save from failure an important business concern; that under the circumstances Mr. Frick and I had decided to favor the proposed purchase of stock unless the President objected to the same. I further stated that the total productive capacity of our companies would not be materially increased by the ownership of the properties of the Tennessee Co., and, after the purchase, would probably not amount to more than 60 per cent of the total steel production in this country, which was about the percentage of our companies at the time of the organization of the United States Steel Corporation; that our policy was opposed to securing a monopoly in our lines or even a material increase of our relative capacity. I understood the President to say that, while he would not and could not legally make any binding promise or agreement, he did not hesitate to say from all the circumstances as presented he certainly would not advise against the proposed purchase.

If consistent, will you kindly write me if the above statement is in accordance with your understanding and recollection?

Sincerely, yours,

E. H. GARY.

Mr. Root responded as follows:

NOVEMBER 11, 1907.

MY DEAR MR. GARY: I have your letter of November 7. It fully agrees with my recollection of the interview to which you refer, in which you stated to the President the circumstances under which the United States Steel Corporation had been asked to relieve the financial situation by purchasing a majority of the stock of the Tennessee Coal, Iron & Railroad Co. I have sent a copy of your letter, with this answer, to the President, with a recommendation that it be transmitted to the Department of Justice for filing there

Very sincerely, yours, ELIHU ROOT.

I received another letter from Mr. Root, as follows:

NOVEMBER 20, 1907.

DEAR MR. GARY: I inclose a copy of a letter which I have sent to the President, inclosing a copy of your letter of November 7, and a copy of the President's answer. You have a complete copy of what you will be able to find upon the files of the Department of Justice if any occasion arises.

Very sincerely, yours, ELIHU ROOT.

Inclosed were the following copies: First, from Mr. Root to the President, dated November 11, 1907:

> DEAR MR. PRESIDENT: I transmit herewith a copy of a letter from Mr. E. H. Gary, president of the United States Steel Corporation, dated November 7, 1907, received by me on the following day. You will perceive that it relates to the interview which Mr. Gary had with you last week regarding the purchase by his company of the capital stock of the Tennessee Coal, Iron & Railroad Co. I send also a copy of my answer to Mr. Gary, and recommend that these papers be sent to the Department of Justice and placed upon the files of that department.
>
> Very truly, yours,
>
> ELIHU ROOT.

A letter from the President to the Secretary of State:

> NOVEMBER 19, 1907.
>
> MY DEAR MR. SECRETARY: I am in receipt of your letter of the 11th instant and inclosures, and have forwarded them to the Attorney General to be placed on the files of the Department of Justice, together with a copy of this letter. Mr. Gary states the facts as I remember them.
>
> Very truly, yours, THEODORE ROOSEVELT.

Judge Gary further says:

> MR. GARY. I remember some of the conversation. I remember the Secretary of State saying to the President that of course he had no right to say that we could buy this property. The President said he understood that. He thought all we wished to know was what would be the disposition of the President and the Department of Justice in case we did buy, for the reason that if there was an objection by the Government we would not accomplish the desired result.
>
> I remember the President saying he was glad to know that the percentage in production of the steel of this country of the United States Steel Corporation was not greater and was even less than it was at the time of the organization of the company; that he felt, as I knew, that the question of monopolies in this country was a very serious one, but he said:
>
> "In view of the fact that your percentage has not increased, but has decreased, and the further fact that all of us have an appreciation of the financial conditions in New York, I do not believe that anyone could justly criticize me for saying that I would not feel like objecting to the purchase under the circumstances."

Ex-President Roosevelt made the following statement before the committee:

STATEMENT OF HON. THEODORE ROOSEVELT.

> MR. ROOSEVELT. In the fall of 1907 there were severe business disturbances and financial stringency, culminating in a panic which arose in New York and spread over the country. The damage actually done was great, and damage threatened was

incalculable. Thanks largely to the action of the Government, the panic was stopped before, instead of being merely a serious business check, it became a frightful and nation-wide calamity, a disaster fraught with untold misery and woe to all our people. For several days the Nation trembled on the brink of such a calamity, of such a disaster, as you gentlemen doubtless remember.

During those days both the Secretary of the Treasury and I personally were in hourly communication with New York, following every change in the situation, and trying to anticipate every development. It was the obvious duty of the administration to take every step possible to prevent appalling disaster by checking the spread of the panic before it grew so that nothing could check it; and events moved with such speed that it was necessary to decide and to act on the instant, as each successive crisis arose, if the decision and action were to accomplish anything. The Secretary of the Treasury took various actions, some on his own initiative, some by my direction. Late one evening I was informed that two representatives of the Steel Corporation wished to see me early the following morning, the precise object not being named. Next morning, while at breakfast, I was informed that Messrs. Frick and Gary were waiting at the office; I at once went over, and as the Attorney General, Mr. Bonaparte, had not yet arrived from Baltimore, where he had been passing the night, I sent a message asking the Secretary of State, Mr. Root, who was also a lawyer, to join us, which he did. Before the close of the interview and in the presence of the three gentlemen named, I dictated a note to Mr. Bonaparte, setting forth exactly what Messrs. Frick and Gary had proposed and exactly what I had answered, so that there might be no possibility of misunderstanding. This note was published in a Senate document while I was still President, and is already spread on the minutes of your committee. It runs as follows:

Shall I read it, gentlemen?

The CHAIRMAN. Just as you like, Col. Roosevelt.

Mr. ROOSEVELT. With your permission, I will read it.

THE WHITE HOUSE,
Washington, November 4, 1907.

MY DEAR MR. ATTORNEY GENERAL: Judge E. H. Gary and Mr. H. C. Frick, on behalf of the Steel Corporation, have just called upon me. They state that there is a certain business firm (the name of which I have not been told) which will undoubtedly fail this week if help is not given. Among its assets are a majority of the securities of the Tennessee Coal Co. Application has been urgently made to the Steel Corporation to purchase this stock as the only means of avoiding a failure. Judge Gary and Mr. Frick informed me that as a mere business transaction they do not care to purchase the stock; that under ordinary circumstances they would not consider purchasing the stock, because but little benefit will come to the Steel Corporation from the purchase; that they are aware that the purchase will be used as a handle for attack upon them on the ground that they are striving to secure a monopoly of the business and prevent competition—not that this would represent what could honestly be said, but what might recklessly and untruthfully be said.

They further informed me that, as a matter of fact, the policy of the company has been to decline to acquire more than 60 per cent of the steel properties, and that this purpose has been persevered in for several years past, with the object of preventing these accusations, and, as a matter of fact, their proportion of steel properties has slightly decreased, so that it is below this 60 per cent, and the acquisition of the property in question will not raise it above 60 per cent. But they feel that it is immensely to their interest, as to the interest of every responsible business man, to try to prevent a panic and general industrial smashup at this time, and that they are willing to go into this transaction, which they would not otherwise go into, because it seems the opinion of those best fitted to express judgment in New York that it will be an important factor in preventing a break that might be ruinous; and that this has been urged upon them by the combination of the most responsible bankers in New York who are now thus engaged in endeavoring to save the situation. But they asserted they did not wish to do this if I stated that it ought not to be done. I answered that while, of course, I could not advise them to take the action proposed, I felt it no public duty of mine to interpose any objections.

Sincerely, yours,

THEODORE ROOSEVELT.

Hon. CHARLES J. BONAPARTE,
Attorney General.

Mr. Bonaparte received this note in about an hour and that same morning he came over to acknowledge its receipt, and said that my answer was the only proper answer that could have been made, having regard both to the law and to the needs of the situation; he stated that the legal situation had been in no way changed, and that no sufficient ground existed for prosecuting the Steel Corporation. But I wish it distinctly understood that I acted purely on my own initiative and that the responsibility for the act was solely mine.

I was intimately acquainted with the situation in New York. The word "panic" means fear, unreasoning fear; to stop a panic it is necessary to restore confidence; and at the moment the so-called Morgan interests were the only interests which retained a full hold on the confidence of the people of New York, not only the business people but the immense mass of men and women who owned small investments or had small savings in the banks and trust companies. Mr. Morgan and his associates were, of course, fighting hard to prevent the loss of confidence and the panic distrust from increasing to such a degree as to bring any other big financial institutions down, for this would probably have been followed by a general and probably world-wide crash. The Knickerbocker Trust Co. had already failed, and runs had begun on or were threatened as regards two other big trust companies. These companies were now on the fighting line, and it was to the interest of everybody to strengthen them in order that the situation might be saved. It was a matter of general knowledge and belief that they or the individuals prominent in them held the securities of the Tennessee Coal & Iron Co., which securities had no market value and were useless as a source of strength in the emergency. The Steel Corporation securities, on the contrary, were immediately marketable, their great value being known and admitted all over the world, as the events showed. The proposal of Messrs. Frick and Gary was that the Steel Corporation should at once acquire the Tennessee Coal & Iron Co. and thereby substitute among the assets of the threatened institutions (which, by the way, they did not name to me) securities of great and immediate value for securities which at the moment were of no value. It was necessary for me to decide on the instant before the stock exchange opened, for the situation in New York was such that any hour might be vital, and failure to act for even an hour might make all subsequent effort to act utterly useless. From the best information at my disposal I believed (and believe) that the addition of the Tennessee Coal & Iron property would only increase the proportion of the Steel Co.'s holdings by about 4 per cent, making them about 62 per cent instead of about 58 per cent of the total value in the country, an addition which by itself, in my judgment (concurred in, I may add, not only by the Attorney General but by every competent lawyer with whom I talked), worked no change in the legal status of the Steel Corporation.

Furthermore, I believed that the action was emphatically for the general good; that it offered the only chance for arresting the panic; and that it would probably arrest the panic, as it did. I answered Messrs. Frick and Gary, as set forth in my published letter, to the effect that I did not deem it my duty to interfere—that is, to forbid the action which, more than anything else, in actual fact, saved the situation. The result justified my judgment. The panic was stopped, public confidence in the solvency of the threatened institutions being at once restored.

Incidentally I may mention that when I was in Birmingham last spring every man I met, without exception, who was competent to testify, informed me voluntarily that the results of the action taken had been of the utmost benefit to Birmingham, and therefore to Alabama, the industry having profited to an extraordinary degree, not only from the standpoint of the business but from the standpoint of the community at large and of the wage workers, by the change in ownership. The results of the action I took were beneficial from every standpoint, and the action itself at the time when it was taken was vitally necessary to the welfare of the people of the United States.

In my judgment I would have been derelict in my duty, I would have shown myself a timid and unworthy public officer if in that extraordinary crisis I had not acted as I did act. In every such crisis the temptation to indecision, to nonaction, is great, for excuses can always be found for nonaction, and action means risk and the certainty of blame to the man who acts. But if the man is worth his salt he will do his duty; he will give the people the benefit of the doubt and act in any way which their interests demand and which is not affirmatively prohibited by law, unheeding the likelihood that he himself, when the crisis

> is over and the danger passed, will be assailed for what he has done.
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> Every step I took in the matter was open as the day, and was known in detail at the moment to all people. The press contained full accounts of the visit to me of Messrs. Frick and Gary, and heralded widely and with acclamation the results of that visit. At the time the relief and rejoicing over what had been done were well nigh universal. The danger was too imminent and too appalling for men to be willing to condemn those who were successful in saving them from it. But I fully understood and expected that when there was no longer danger, when the fear had been forgotten, attack would be made upon me.
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> If I were on a sailboat I should not ordinarily meddle with any of the gear; but if a sudden squall struck us, and the main sheet jammed, so that the boat threatened to capsize, I would unhesitatingly cut the main sheet, even though I were sure that the owner, no matter how grateful to me at the moment for having saved his life, would a few weeks later, when he had forgotten his danger and his fear, decide to sue me for the value of the cut rope.

The ex-President further said:

> Mr. ROOSEVELT. Now, Mr. Littleton, I can answer you right away that I was then thoroughly satisfied, and the after events made me even more thoroughly satisfied, that what was done was necessary to save the situation; that the panic would have spread and very great disaster occurred if exactly what was done had not been done. A good many of the questions, Mr. Littleton and Mr. Stanley, that you are offering are requiring me to search the hidden domain of motive of Mr. Frick and Mr. Gary. I never supposed that they were going to take action that would be damaging to themselves, for I would have been exceedingly sure they would have gotten no gratitude for taking such action if they had taken it. My feeling toward them was—I can illustrate it by two similes. I have spoken of a sailboat already. If it is necessary to haul on a rope on a boat in order to prevent the boat from going over, I welcome the help of any husky individual that hauls, and I do not care whether he is hauling from altruistic motives about me or to save his own skin. I want him to pull hard on the rope. That is all I want.
>
> Again, if a fire is coming down a row of buildings, I expect the man on the end of the row to join in and help put out the fire farther up the row, partly, I hope, because he feels kindly toward the threatened people, and also because if the fire spreads it will burn his own building. But I do not ask him to analyze the extremely mixed motives which made him come forward and help put out that fire. I want him to help put out the fire. That is all.

Ex-President Roosevelt further said, speaking of this transaction:

> I never had any doubt as to the wisdom of my action—not for a moment, and if Mr. Schley says that he does not know that he would have failed without the action being taken, that was taken, then he is the only man in New York who does not know it.

Near the end of his testimony occurs the following:

> Mr. ROOSEVELT. Believe that I had acted wisely? I felt that the information I had received on the situation here, on all the vital points in which I was concerned, was essentially accurate. The only reason, Mr. Young, I hesitated to answer your question at all was this: It is not necessary for me now, and it was not necessary for me at that time, to form any judgment as to whether the representatives of the Steel Corporation were anxious to get possession of that company, because it would be of benefit to the Steel Corporation, or whether they were only anxious to save the situation caused by the panic. I never found it necessary to try in my own mind to apportion the relative weights of those motives in their minds. But in all essentials the representations they made to me I believed then to be accurate, and on all the information I have had since I believe to be accurate. They were in accord with what I had heard from New York, in so far as they influenced my action and in so far as they affected my judgment. From the public standpoint the events exactly bore out and justified what I had been told and the action I took on what I had been told.

On the return of Messrs. Frick and Gary from Washington the deal was closed, on the basis of par for the Tennessee Coal, Iron & Railroad Co. stock, which was paid for in second mortgage 5 per cent bonds of the United States Steel Corporation, at their market price at that time, namely, $0.84 of their face value, or figuring the bonds as worth par, about $119.75 for the stock. Messrs. Hanna, Schley, and Gates insisted that the minority stockholders should have the right to turn in their stock at the same price. This was acceded to—all of the minority stockholders took advantage of this option.

Before agreeing to pay par for the Tennessee Coal, Iron & Railroad Co. stock Mr. Gary offered 90 for it. This Mr. Schley refused, on the ground that it would not be sufficient to help him out and that nothing less than 100 would save him.

In addition to the stock owned by Schley, or Moore & Schley, or pledged with Moore & Schley, Col. Payne had altogether 25,000 shares of the stock of the Tennessee Coal, Iron & Railroad Co., with a par value of $2,500,000. As soon as the sale went through, this stock was converted into United States Steel Corporation bonds and the proceeds loaned to Moore & Schley, so Moore & Schley obtained an additional $2,500,000 through that deal.

In order to make it certain that Moore & Schley would not fail, Mr. Payne and Mr. Baker, president of the First National Bank of New York City, and one other gentleman tendered $1,000,000 each of first-class securities, to be placed in the hands of Mr. Morgan as security for further loans in aid of Moore & Schley should such further aid become necessary. Mr. Morgan did not find it necessary to draw upon this fund.

The price paid by the United States Steel Corporation, according to the statement of all the witnesses, with the possible exception of Mr. Gates, was at least the full market value of the stock. Mr. Gates says he regarded it as a forced sale, and he also adds that if the stock had been thrown upon the market he could have bought it at a very low price and made a large amount of money. He adds that the market was a purely nominal one, and if the day before Messrs. Gary and Frick saw President Roosevelt anybody had thrown 2,500 shares of the stock upon the market it would have probably brought the price down to 110 or 115. On the other hand, he would have probably found difficulty in buying that stock at 150.

Mr. Oglebay says that he was not forced to sell and was willing to sell under the conditions that existed.

When it is recollected that these gentlemen, Messrs. Gates, Hanna, and Oglebay, were among the sellers, their testimony has a special weight, and the conclusion is fair that the price paid was a fair one for the stock and under the conditions that existed a remarkably liberal one. It has been intimated, in the public press and in certain other quarters, that there was in the market and among some financial institutions an effort to depreciate Tennessee, Coal, Iron & Railroad Co. stock and to embarrass Moore & Schley for the purpose of aiding the United States Steel Corporation in purchasing the property at a low figure. The committee called before it Messrs. Gates, Hanna, Topping, Oglebay, Thorne, and Schley, all of whom were members of the syndicate whose stock was sold. Not a scintilla of evidence developed to justify the suspicion that there was a drive at either Moore & Schley, or the Tennessee Coal, Iron & Railroad Co. stock for any purpose. No witness testified that he had, or now has, any suspicion that such was a fact, and most of the witnesses deny the existence of such an attack in most vigorous language. (Hearings: Schley, pp. 1065, 1098, 1109, 1071, 1101; Hanna, pp. 876, 879; Oglebay, pp. 930, 931; Topping, p. 1258; Ledyard, p. 956; Gates, p. 13.)

The evidence indicates that there was no great eagerness on the part of the United States Steel Corporation to purchase the property. Judge Gary continually insisted that the price was too high. Mr. Gayley, former vice president of the United States Steel Corporation, said that when the Tennessee Coal, Iron & Railroad Co. stock could have been bought for $50 a share, he suggested that the purchase might be a good thing on account of the ore and coal reserve, but that Mr. Frick was opposed to it and nothing came of the proposition.

Mr. Schley, whose position might naturally have made him suspicious of the motives of the United States Steel Corporation, thinks that company was not anxious to purchase the Tennessee Coal, Iron & Railroad Co. stock, and it appears that Judge Gary preferred to loan Moore & Schley $5,000,000 rather than to purchase the stock.

Mr. Gates does testify that Mr. Kessler told him that Mr. Morgan had expressed a willingness to pay 150 for the stock, if those interested with him were satisfied. Judge Gary, on the contrary, swears that Mr. Morgan told him that Mr. Kessler had said that he thought the control of the company could be purchased at about 130 and asked for Judge Gary's opinion, and that he, regarding the price as unreasonable, turned down the proposition and nothing came of it. Messrs. Morgan and Kessler, who could have settled this question of fact, unfortunately were not brought before the committee. Everything seems to indicate that while the corporation was willing to purchase the stock at the price paid it was not anxious to do so and displayed a considerable degree of reluctance. (Hearings: Gary, pp. 127, 147; Gayley, p. 402; Schley, p. 1101; Ledyard, p. 962; Gates, p. 10.)

The effect of the sale of the Tennessee Coal, Iron & Railroad Co, stock has been stated by a number of witnesses. Their testimony is uniform as to its great effect in allaying the panic. Mr. Hanna says that that deal was the turning point of the panic.

Mr. Schley says that his customers made good immediately when they got the bonds. That the reason that the sale of the Tennessee Coal, Iron & Railroad Co. stock relieved the situation more than the sale of any of his other industrial stock would have done was that he had so much of it. The sale relieved every friend he had; it relieved his office and brought in immediately United States Steel Corporation bonds, or money. The bonds were practically equivalent to money; it relieved the whole situation immediately. It paid Kessler's loan; it brought us in $12,000,000; the effect was enormous. When you reduce $35,000,000 of loans by $12,000,000, bringing it down to $23,000,000, you are bringing into your boxes 30 or 35 per cent, of whatever the margin you have up, of $12,000,000, to bring into your boxes and swell it. Thirty per cent of $12,000,000 is $3,600,000; that strengthens you and your loans are less. Moore & Schley were $5,000,000 richer with $12,000,000 less loans and within 35 days impregnable.

It was generally believed in financial circles of New York that this was one of the most important steps taken in stopping the panic. (Hearings: Pp. 917, 1124, 1125, 918, 917; Schley, pp. 1042, 1043, 1124, 1125, 1045, 1046, 1061, 1059, 1056, 1095, 1051, 1053, 1054, 1055, 1086, 1087, 1109, 1110, 1067, 1077, 1078, 1065, 1063, 1066, 1067, 1079, 1081, 1076, 1082, 1098, 1071, 1101, 1072, 1073, 1062; Hanna, pp. 860, 855, 856, 898, 862, 863, 872, 903, 909, 913, 876, 879, 858; Ledyard, pp. 933, 935, 939, 936, 937, 946, 950, 956; Gates, pp. 5, 12. 16, 13; Topping, p. 1258; Gary, pp. 131, 185, 137, 138, 139, 132, 133, 139; Roosevelt, pp. 1369 to 1372, inclusive, 1383, 1384, 1388, 1392; Oglebay, pp. 927, 930, 931.)

RAILROADS.

The railroads owned by the United States Steel Corporation consist:

1. Of railroads which are common carriers in the ordinary sense of that term, but a majority of whose business comes from the United States Steel Corporation itself.

2. Of railroads which are partly plant facilities but do some work for others than the owners, and it is claimed perform a part of the actual service of transportation for the railroads for which they are entitled to a division of rates.

3. Of pure plant facilities.

1. The railroads of the first class are the Duluth & Iron Range Railroad, the Duluth, Missabe & Northern Railway, and the Pittsburgh, Bessemer & Lake Erie Railroad, which is operated by the Bessemer & Lake Erie Railroad Co.

The first two named are mainly ore roads and extend from the iron-ore mines of Minnesota to Lake Superior, the former reaching the lake at Two Harbors and the latter at Duluth. The third of these roads extends from Conneaut, on Lake Erie, to Bessemer, near Pittsburgh. It is used mainly for transporting ore from Conneaut, on Lake Erie, to Pittsburgh, and coal from Pittsburgh northward.

The mileage of these three roads, exclusive of spurs, sidings, second tracks, etc., is, respectively, 200, 224, and 208 miles.

The Duluth & Iron Range Railroad was built by the owners of the principal mines on the Vermillion iron-ore range for the purpose of transporting their ore to Lake Superior. This was done at a time when the whole country, this railroad now serves, was a wilderness.

The Duluth, Missabe & Northern Railway, in like manner, was built by the owners of some of the mines on the Mesabi iron range for the purpose of transporting their ore to Duluth, on Lake Superior. The first of these roads was acquired by the United States Steel Corporation as a part of the assets of the Federal Steel Co., and the other was acquired as a part of the property of the Lake Superior Consolidated Mines Co. The Great Northern Railway owns a line which competes with these roads, and has docks at Superior, Wis.

The principal business of the roads belonging to the United States Steel Corporation, above mentioned, is the transportation of iron ore. This is carried in large quantities for independent operators as well as for the United States Steel Corporation. These roads also do a general freight and passenger business. The earnings of both these roads during their early years were small, the first mentioned paying no dividends from 1884 to 1899, but latterly their earnings have been phenomenally large. The freight rates for the carriage of ore which the United States Steel Corporation found in force when it acquired the property remained unchanged until last fall, when a cut was announced of from 25 to 40 per cent.

The Pittsburgh, Bessemer & Lake Erie Railroad Co. is capitalized at $12,000,000 in stock and has a bonded indebtedness of $15,269,000. The Bessemer & Lake Erie Railroad Co., which is the operating company and owns about 8 miles of track, is capitalized at only $500,000 and has a funded debt of $4,030,000. Its total annual tonnage of freight is about 13,000,000 tons, of which 7,000,000 tons is iron ore, 3,500,000 tons coal, 700,000 tons iron and steel, and the remainder miscellaneous freight. In late years it has received no ore for transportation save for the United States Steel Corporation. Ore is shipped southward and eastward from Buffalo, Conneaut, Ashtabula, Fairport, Cleveland, Lorain, Huron, and Toledo.

Very little ore is shipped south from Buffalo. The connection south from Erie is over the Pennsylvania Railroad. The connection south from Ashtabula is over the Lake Shore & Michigan Southern and the Pennsylvania Railroads, at Fairport the Baltimore & Ohio, at Cleveland the Pennsylvania, at Lorain the Baltimore & Ohio and the Lorain & West Virginia, at Huron the Wheeling & Lake Erie, at Toledo the Cincinnati, Hamilton & Dayton and the Hocking Valley. Thus it will be seen that there are plenty of opportunities for competition, if competition is not prevented by agreements, among numerous railroads. The independent iron and steel manufacturers ship all of their ores over roads not owned by the United States Steel Corporation. About the time the Pittsburgh, Bessemer & Lake Erie Railroad was completed to Conneaut the freight rate on iron ore from Lake Erie ports to Pittsburgh was $1.18 a ton—it is now 96 cents a ton. It is claimed that this rate is excessive, and also that the freight rates on Minnesota roads on ore are excessive. However that may be, the Interstate Commerce Commission has complete jurisdiction over shipments from all Lake Erie ports to the Pittsburgh district, and on all interstate shipments from the Minnesota mines, and over shipments from the Minnesota mines which end within the State of Minnesota the State Railway and Warehouse Commission of Minnesota has jurisdiction and authority to fix rates.

The principal railroads belonging to the second class are the Elgin, Joliet & Eastern Railway, the Chicago, Lake Erie & Eastern Railway, the Birmingham Southern Railroad, and the Union Railroad. These differ considerably in character. The Elgin, Joliet & Eastern Railway is a belt line extending around the city of Chicago, from Waukegan on the north to Porter, Ind., upon the south and east. Its capital stock is $6 000 000 and it has a bonded indebtedness of $8,500,000. It has 196 miles of main track, 33 miles of branches, 147 miles of siding, and operates 271 miles in addition under trackage rights.

The Chicago, Lake Erie & Eastern has about 15 miles of main track and 466 miles of branches and spurs. Much of its track is in the vicinity of Gary, South Chicago, Joliet, and Bay View. It is to a large extent a plant facility.

The Union Railroad Co. connects the works of the Carnegie Co. in the vicinity of Pittsburgh and has a main line 16 miles in length.

The Birmingham Southern connects the plants and coal mines of the Tennessee Coal, Iron & Railroad Co., and also connects with some 45 plants of independent manufacturers.

All of these four roads claim the rights to a division of rates or switching charges, and all but the Birmingham Southern Railroad receive compensation from the main lines with which they connect either by a division of rates, a tonnage allowance, or in some other way.

A very large proportion of the business done by all these roads is done for the United States Steel Corporation.

At Birmingham, Ala., the situation is peculiar. The Louisville & Nashville Railroad Co., the Southern Railway Co., and the Frisco Railroad all have direct connections with the plants and mines of the Tennessee Coal, Iron & Railroad Co. Lately a new competing line, the Atlanta, Birmingham & Atlantic Railroad Co., has been built from Brunswick on the Atlantic coast of Georgia to reach the traffic-producing industries of the Birmingham district. The situation is such that it is practically impossible for it to connect physically with the plants in the Birmingham district. The Louisville & Nashville Railroad, the Southern Railroad, and the Frisco Railroad are its competitors, and so it sought and made a joint traffic agreement with the Birmingham & Southern Railroad. The situation is such that if the Atlanta, Birmingham & Atlantic Railroad can not make this connection it will be practically worthless and the money expended in its 430 miles of road will be lost. It is naturally to the interest of the other competing roads to prevent this connection. They have therefore brought proceedings before the Interstate Commerce Commission to prevent the consummation of this contract. A vast amount of testimony has been taken, and it is expected that a decision will be reached before July.

The Interstate Commerce Commission has laid down some general principles governing cases of this kind. It has held that the mere fact that a railroad was owned by a manufacturing company did not of itself deprive it of a right to share in the through rate if it actually performed service in transportation; that it was impossible to lay down a general rule which should determine when a railroad was a mere plant facility and when it was a common carrier entitled to a division of rates, but that each case must rest upon its own facts. The division between a facility for manufacturing industry and a facility for transportation seems clear enough, and in any given case, where the facts are before the commission, there ought to be very little difficulty in arriving at a just decision. In many instances the compensation received for the service of these roads from the trunk lines is extremely liberal, in some cases amounting, in my opinion, to an indirect rebate. I think this is a matter which deserves the early attention of the Interstate Commerce Commission.

RESTRAINT OF TRADE.

INTERLOCKING DIRECTORATES.

The directors of the United States Steel Corporation, generally speaking, are men of wealth, having great business ability and large interests. Most of them have observed the old doctrine that it is not wise to put all their eggs in one basket. Their experience and ability has been largely utilized by the companies with which they are connected. They are nearly all directors in other companies than the United States Steel Corporation. These companies are of various kinds and include railroads, banks, and manufacturing companies. No evidence was given or offered tending to show that the fact of such relations, on the part of the directors of the United States Steel Corporation, had ever been used or attempted to be used to the injury of competitors, to obtain any unfair advantage for the United States Steel Corporation, or to the detriment of the general public. In every instance the directors of the United States Steel Corporation constitute only a very small minority of the directors of the other companies with which they are connected. Such relations, however, give opportunity for abuses and agreements in restraint of trade.

POOLING AGREEMENTS.

After the steel business became a great industry and previous to the organization of the United States Steel Corporation, there was a succession of boom years, when prices rose to fabulous heights, followed by years of corresponding depression, when each man was struggling for business enough to keep his works running. These struggles resulted in relentless and destructive competition, when the weaker was frequently driven out of business and was glad to sell his plant to a more successful rival at a fraction of its cost. After these trade wars had continued for a time the manufacturers, or those of them who had survived, would generally get together and enter into an agreement fixing prices, or apportioning the business to be done by each, or both. These associations, or pools, did not in any instance embrace the whole industry, but only a portion of it. The only ones which were investigated by the committee to any extent were the "plate pool," the "structural-iron pool," and the "wire pool." The structural-iron pool was organized about 1898 and the plate pool in the fall of 1900. Mr. William C. Temple was the so-called commissioner, or secretary, of both these pools. The parties to the plate pool were the Carnegie Co., Jones & Laughlin, the Illinois Steel Co., the Crucible Steel Co. of America, Otis Steel Co., Tidewater Steel Co., Lukens Iron & Steel Co., Worth Bro. Co., Central Iron & Steel Co., and the American Steel & Wire Co.

Of these corporations, the Carnegie Steel Co., the Illinois Steel Co., and the American Steel & Wire Co. later became subsidiaries of the United States Steel Corporation.

This pooling agreement provided, in substance, that each of the parties to it should be entitled to a certain percentage of the plate business stated in the agreement, provided for the fixing of minimum prices, and prescribed a penalty to be assessed against any member who should exceed his allotted portion of the business, which penalties were to be paid to those members of the association who received less than their share of the business. The penalties were fixed upon a tonnage basis. Provision was made that each of the members of the association should make reports to the commissioner, and the commissioner in turn transmitted the result of these reports to the various members of the association. Accurate accounts were kept, and for a time the penalties were rigorously exacted. The association had frequent meetings, and the members became well acquainted with each other and acquired confidence each in the other. This agreement continued in force until the last of December, 1904, and the Carnegie Co., the American Steel & Wire Co., and the Illinois Steel Co. remained parties to it until that time. It was brought to an end by Judge Gary. Mr. Temple, the commissioner, states that the association was informed that Judge Gary had investigated the matter and ordered the subsidiaries of the United States Steel Corporation to withdraw from it. He said Judge Gary stated that he did not believe in the association, did not believe that the association was desirable or necessary, and he demanded the abrogation of the agreement and the cessation of the association. So the association was dissolved and distributed its assets. (Hearings, p. 555; Temple, pp. 1717, 1718, 1719, 1729.)

But the members of the association continued for some two years after to give each other the same information as to the amount of business each was doing as they had done during the existence of the association. After that they ceased to give such information.

Undoubtedly the purpose of giving this information was that each might know the extent of the business done by his competitor. These men were well informed as to the plant capacity of the others, and if each was doing about that proportion of the whole business which its plant capacity bore to the whole plant capacity, the inference would naturally be that all were selling at about the same price; while if the business of one or more suddenly or largely increased the reason for the increase would naturally be a subject of inquiry.

The wire pool continued to a later date and resulted in the prosecution of the members in the court. The history of that transaction is too fresh in the minds of all to require further comment.

These associations were all agreements to apportion output and fix prices, and of course plain violations of the antitrust law. Judge Gary denied before the committee any knowledge of the existence of these pools until about the time of their termination. There is no evidence that any of the officers of the United States Steel Corporation were ever present at any of the meetings, but that some of them had knowledge of the existence of the pools seems certain.

GARY DINNERS.

In November, 1907, and at irregular intervals thereafter, Judge Gary gave a series of dinners in New York, to which men who were prominent in the iron and steel industry were invited. The purpose of these dinners is stated to have been to bring about a better acquaintance among the men influential in the iron and steel industry and to discuss matters of common interest in the industry and to exchange information.

Judge Gary, at a dinner given him in London by the governors of the Iron and Steel Institute of Great Britain, on September 11, 1908, referring to the first of these meetings, said in part:

> Early in November an invitation was extended to the leading men connected with this industry, including about 60 in number, to meet in conference, and without exception the invitation met with an affirmative and cordial response. * * * At the first meeting, after each one present had expressed his opinion what the conditions and dangers were, as I have previously stated, the doctrine of conciliation and cooperation was suggested. In some respects at least it was novel. In times gone by, when business prosperity was interrupted by a financial depression or by doubt and distrust, however provoked, it had been customary for each one to consider and to endeavor to protect his own interests regardless of all others. Each sold his own products wherever and at whatever price he could obtain. Demoralization, panic, and prolonged failure followed. * * * The suggestions which were made and finally adopted were simple. It was proposed to appoint a general committee of seven with power to appoint subcommittees connected with special lines. To the subcommittees any one interested in a particular line might apply for information and advice. And to the general committee the respective chairmen of subcommittees or any individual might apply for information and advice. Without going into details it suffices to say that these committees kept fully informed in regard to the affairs of all and freely advised individuals with respect to the conditions generally or in detail. While they were given no power, their advice was usually followed. No agreement to maintain prices, restrict output, or divide territory or any other agreement was made. Without

> going further into details it is sufficient to say the effort has been successful. It was to be expected there would be some mistakes by subordinates, and that to some extent there would be transactions beyond the bounds of propriety and fairness, but the total result has been a great benefit.
>
> A certain percentage, however small, of the people of every country is made up of ordinary liars. The wonder is that such a large percentage believe the liars. And, of course, from time to time manufacturers were imposed upon by proposed purchasers, who made the usual misrepresentations that other manufacturers were selling at a reduced price.
>
> It was not long before the movement secured the approval and hearty cooperation of all concerned. Prices have generally been maintained, demoralization and insolvency prevented, and greater profits realized. The benefit to general business conditions and the influence in aiding the restoration of business prosperity are testified to by financiers and by the press generally. Perhaps the most prominent good which has resulted is found in the feeling of friendship which exists among the members of the industry. This will be of great benefit and profit to all in the long run. Frequent meetings are held at which each one present expresses with great freedom and frankness his views concerning all questions involved, and all have confidence in one another. The business is well in hand. The manufacturers are running their own business for their own gain, and yet at the same time they have injured no others. On the contrary, they have advanced the interests of their customers, their employees, and the public generally. * * *
>
> I do not advocate anything that is antagonistic to the laws or the public welfare. What I propose is the utilization of our opportunities for the advancement of all our interests—a closer connection, a better understanding of ideas and information conveyed by one to another concerning all the business questions, and an organized committee composed of men whose advice should always be followed. These thoughts amplified and formulated should bring to all of us the largest measure of success.

At the dinner held at the Waldorf-Astoria Hotel January 11, 1911, Judge Gary was the principal speaker, and the main question of discussion during the evening was the maintenance of prices. Many of the speakers did not refer to this subject, but quite a number did, and all who did mention the subject expressed an opinion that the reduction of prices would be a mistake and would not bring increased business. Among other things, Judge Gary said:

> At this present time there is not in this country a demand for more than 50 per cent of the total producing capacity in our lines. It is obvious from this statement of fact that there is not enough business to go around and that there is no possible way of protecting one another and thereby protect one's self, except to submit ourselves to the conditions as they exist and to take and be satisfied with our fair proportion of the business that is offered. It is not necessary in this presence to say that if one individual or company engaged in this business tries to secure or

> actually secures for a day or a week more than a fair proportion, still it simply means that in the long run that man or that company gets no more than its share. He has accomplished nothing whatever except to bring about demoralization, reduction of prices, and heavier losses to all concerned, including himself. This is a logical proposition. No man is smart enough to long continue a practice which gives to him more than his fair share of business. He may get away from his friend or competitor or his customer for a single transaction or two transactions, but it is just as certain that the competitor whose business has been taken away will the next day or the next week enter within the domain of the one who first trespassed, taking away his business and adjusting, equalizing, and bringing about at the end of the year or at some definite period simply the natural division of business and at greatly reduced prices. And there is no exception to this unless it be on the basis of the strong man or the strong company having the advantage over his neighbor, if there is such a one, and he gets the business only by means which result in forcing his competitor out of business and in that way antagonizing the public interest and earning the condemnation not only of the public but of the very Government itself. Therefore it is impracticable.
>
> Now, in view of the fact that we have no right legally to enter into any arrangement by direct or indirect means which enables us to maintain prices, to divide territory, to restrict output, or in any way to interfere with the laws of trade or to stifle competition; in view of the fact that we can not legally directly or indirectly do anything which may be construed to be in restraint of trade, and are therefore relegated to the one position of treating each other on the basis of fair, just, and equitable treatment, it behooves us to use the greatest care in the exercise of our rights and in the transaction of our business so as to make it absolutely certain that day by day, and with reference to every transaction we are certain to recognize the rights of our competitors, our friends, and the obligations which we are under toward them.

Again he says:

> I would not make an agreement under any circumstances to maintain prices or to do or refrain from doing anything which would prevent me from being absolutely independent from all others in every respect concerning every department of our corporation, or in regard to the conduct of our business and I would not ask for any different conclusion from others. As I stated before the very fact that it is understood we have this right that we are independent that we can go out of this room and do exactly as we please without violating any agreement or understanding and that all must depend upon the belief that as honorable men we are desirous of conducting ourselves and our business in such a way as not to injure our neighbors must make each of us more careful in regard to the conduct of our affairs and there will be no secrecy in what we do. (Gary, hearings, pp. 1772, 1773, 1776, 1779.)

It is evident that the question raised by these dinners is a somewhat difficult and delicate one. Section 2 of the antitrust act, so-called, prohibits monopolies and the attempt to monopolize. That fierce and unrestrained competition which is intended to result, and if carried far enough inevitably does result in the destruction of one or more of the competitors and the survival of the fittest, has always been construed by the courts as strong evidence of an intent to monopolize. On the other hand, section 1 prohibits every contract, combination, or conspiracy in restraint of trade or commerce among the several States or with foreign nations. On one hand the individual or corporation is prohibited from entering into combinations to fix prices, limit output, divide territory, etc., and on the other from crushing his rival by unfair means with a view to obtaining his business. Between these two extremes there are many things the corporation may do to advance its business interests, and it is only when we approach the border line upon one side or the other that difficulty arises. No one would contend that the manager of a large corporation in time of business depression was bound to run his works to their full capacity without reference to the extent of the market or what portion of that market would be occupied by business competitors. His duty to the stockholders requires him to keep informed upon such points.

Would any one contend that the law prohibited him from ascertaining from his competitor the extent of the latter's production in exchange for like information, given his competitor as to the business of his own corporation? If two companies can do this many can do it. Take, for instance, the manufacturer of steel rails. Each probably now knows the capacity of the plant of each of his competitors, and if he knows how much business each is doing it is but a matter of computation to ascertain the amount of the entire demand in the country and what proportion that demand bears to the entire capacity of all of the plants in the country. If it be found that the production of each competitor is in the same proportion to the entire production that his plant capacity is to the entire plant capacity, the inference is very strong that all are selling at about the same price. But if it should be found that the production of one is entirely out of proportion to the capacity of his plant the inference would be very strong that he was underselling his competitors or giving some other advantage to his customers and the conduct of each competitor would undoubtedly be influenced, if not absolutely determined, by the information he obtained in this manner. Assuming, as I think we must, that the obtaining of such information is entirely legitimate under the law, it will be readily seen how short a step it is to a condition of affairs where there will be a tacit understanding between all of the competitors that each will keep his production within the limits which are marked out for it by the proportion its plant capacity bears to the total plant capacity of all engaged in the business. But this would be a conspiracy in restraint of trade. Can there be any legal objection to competitors in business exchanging views as to general business conditions and expressing opinions as to what course ought to be taken as to prices? Such a course tends to stability in business conditions and benefits not only the producers but the consumers and the entire business public. But again, how narrow is the division, how almost intangible the barrier, that separates this line of conduct from one where there is a tacit understanding after the matter is discussed, that each is to carry out the line of conduct indicated as most desirable by the opinions expressed. But, on the other hand, can it be that we have reached a point where business men engaged in the same line of industry can not have the benefit of each other's knowledge, without subjecting themselves to the penalty of fine and imprisonment? In our judgment it would require a far more careful scrutiny into the facts and the methods of the men who met at the Gary dinners than was given to them or could well be given to them by the committee to determine whether the conduct of the persons engaged crossed the intangible line which separates what is permissible and proper from that which is prohibited by the law.

MONOPOLY OF RAW MATERIALS.

IRON ORE.

It has been claimed that the United States Steel Corporation, by obtaining control of the Tennessee Coal, Iron & Railroad Co., obtained a monopoly or monopolistic control of the iron and steel business south of the Ohio River, which monopoly or monopolistic control was based upon the large ownership of that company of the raw materials necessary for the manufacture of iron and steel, namely, iron ore and coal. The question of monopoly can best be considered in connection with the general ore situation throughout the entire United States. It will be remembered from the former statements contained in this report that the red ores in the Birmingham district, which constituted the great bulk of the ores so far discovered in that region, outcrop on Red Mountain for a distance of 15 miles or more, and from the outcrop extend to the eastward at an incline of about 30 degrees from the horizontal in a continuous vein of nearly uniform thickness and quality down the mountainside and across Shades Valley to the foot of Shades Mountain, and perhaps beyond. The ore body is so nearly uniform in thickness and quality that the portions of the tonnage of different owners within this mineralized region can be determined with a reasonable degree of accuracy from a comparison of their acreage.

Mr. Perin states that, including the holdings of the Tennessee Coal, Iron & Railroad Co., the Schloss-Sheffield Steel & Iron Co., the Republic Iron & Steel Co., the Birmingham Coal & Iron Co., the Birmingham Iron Co., and the Woodward Co., the Tennessee Coal, Iron & Railroad Co. possess about 70 per cent of Red Ore Mountain. It will be noted that this estimate is confined strictly to Red Ore Mountain. It specifically excludes from the calculation the ore owned by the Central Coal & Iron Co., the Williamson Co., the Southern Iron & Steel Co., the Alabama Consolidated, and perhaps others. It is specifically confined to the immediate Birmingham district and by its terms excludes Shades Valley.

Mr. Given states that he estimates the Tennessee Coal, Iron & Railroad Co. to control 60 to 70 per cent of the ores now being worked. This evidently is not intended to embrace all of the ores in the district. Later, he says that of the total available ore in what he describes as the Birmingham district he estimates the holdings of the Tennessee Coal, Iron & Railroad Co. at from 50 to 60 per cent. He adds that that is nothing but an estimate—there are no figures back of it.

Mr. Walter Moore estimates the entire holdings of the Tennessee Coal, Iron & Railroad Co. at from 60 to 65 per cent of the district tributary to Birmingham.

Prof. Grasty estimates that the Tennessee Coal, Iron & Railroad Co. has over 50 per cent of the ore in the district, and says that in these estimates he simply includes the ore of Red Mountain, considering it as far back as the limit of Shades Creek. Later he fixes it more definitely at from 52 to 53 per cent. He adds that if he should take in Shades Mountain it would increase the percentage to nearer 75. But this is evidently an error, as it clearly appears, from the testimony, that the Tennessee Coal, Iron & Railroad Co. has no holdings on Shades Mountain.

Again Mr. Grasty makes the following estimate:

	Tons.
Tennessee Coal, Iron & Railroad Co	218,000,000
Woodward Steel Co	81,000,000
Republic Iron & Steel Co	48,000,000
Schloss-Sheffield Steel Co	54,000,000
Alabama Consolidated and Southern Steel Co	30,000,000
	431,000,000

Mr. Ernest F. Burchard, an expert of the United States Geological Survey, has also made an estimate as follows:

	Tons.
Total available ores in the whole district	358,400,000
Of which the Tennessee Coal, Iron & Railroad Co. owns	131,000,000
Other furnace companies	109,000,000
Private owners	117,000,000

Percentages:	Per cent.
Tennessee Coal, Iron & Railroad Co. (acreage, 36.8)	37.5
Independent furnaces	31.7
Private owners	30.8

Mr. Bacon, who was president of the company from January, 1901, to May, 1906, says, that including Red Mountain and Shades Valley, to the foot of Shades Mountain, which district has been proven to contain iron ore, by drill holes, the Tennessee Coal, Iron & Railroad Co. owned from 30 to 33 per cent of the acreage and tonnage of that district. He says, further, that since the time he was in charge of the property, the Tennessee Coal, Iron & Railroad Co. has added a one-half interest in 1,100 acres of ore lands. This tract is estimated to contain 70,000,000 tons of ore, of which the Tennessee Coal, Iron & Railroad Co. would own half.

Mr. Bacon says further, that there is an outcrop of ore in the northeast end of Shades Valley, northeast of any ore owned by the furnace companies, which contains at least 170,000,000 tons of ore and that the ore to the south has not been carefully explored.

While the above figures seem somewhat contradictory, a part of the discrepancy is accounted for when we see that the different witnesses are not dealing with exactly the same territory or ownership. But if they had been so dealing, admitting that all of them were qualified, honest, and equally well informed, discrepancies are to be expected, because of the many uncertainties in estimating the amount of ore in any deposit which is not in sight.

In all human probability the proportion of ore owned by the various mining companies in and about Birmingham, is very much less then present development would indicate, because it is these mining companies alone which have been trying to develop their property. The private owners have been waiting for an opportunity to sell and have not been willing to assume the expense of exploration. It would be very remarkable, considering the experience in other mining districts, if it should finally be demonstrated that the Tennessee Coal, Iron & Railroad Co. owns nearly as much as 50 per cent of the available ores in that district. Surely 50 per cent is an outside figure and 35 per cent is probably much nearer the truth. (Hearings: Perin, pp. 972 to 980, 899, 990; Given, pp. 1001, 1019; Moore, p. 1027; Grasty, pp. 5296, 5297, 5300, 5301, 5302, 5303, 5304; Bacon, pp. 5330; 5329, 5350, 5356, 5357, 5358; Burchard, p. 5299; Topping, p. 1256.)

Turning now to the Lake Superior district. In 1911 the Minnesota tax commission estimated the total tonnage of ore on the Mesabi Range at 1,368,000,000 tons. (Hearings, p. 5364.)

Their estimate for the Vermillion Range is about 8,000,000 tons.

In the committee hearings, upon pages 5569 to 5592, inclusive, is printed the detailed statement of the Minnesota Tax Commission of the tonnage and valuation of all the mining property in Minnesota for the year 1908. The total tonnage, as estimated at that time by the commission, is 1,193,728,959 tons. The ore of the United States Steel Corporation is all credited in that table to the Oliver Iron Mining Co. At that time the so-called Hill lease was in full force and the ores contained in the Hill lease to the United States Steel Corporation are a part of the ores credited to the Oliver Iron Mining Co. In other words, the ores credited to the Oliver Iron Mining Co. embrace all the ores controlled by the United States Steel Corporation at that time, including the Hill lease. The total tonnage so credited to the United States Steel Corporation by the Minnesota Tax Commission, in 1908, was 752,352,166 tons, or a trifle over 63 per cent of the total tonnage of the State.

Mr. James J. Hill, who was before the committee as a witness, estimated that the United States Steel Corporation, including all the ores embraced in the Hill lease, controlled from 70 to 75 per cent of all the ores of Minnesota, and that excluding the ores embraced in the Hill lease they controlled about 53 per cent of the ores in Minnesota.

Mr. Hill also testified that the amount of ores on the lands embraced in the Hill lease, added to those leased by the same company to others, were about 400,000,000 tons.

Mr. Joseph Sellwood testified that the ore leased to others, referred to by Mr. Hill, which is the Mahoning mine, amounted to about 150,000,000 tons, and that the remaining ore embraced in the Hill lease would be about 250,000,000 tons, of which 150,000,000 tons were on the Hill lands proper and 100,000,000 tons on the Longyear lands.

In 1909 the estimate of the Minnesota tax commission of the ores of the United States Steel Corporation, not embraced in the Hill lease, is 523,547,253 tons.

Mr. Sellwood's estimate of all the ores upon the Mesabi is between 1,300,000,000 and 1,400,000,000, of which the United States Steel Corporation, outside of the Hill lease, controls, according to his estimate, about 550,000,000 tons. He, however, thinks the Minnesota Tax Commission figures of the Vermillion Range are too low—that those should be estimated at about 20,000,000 tons.

Mr. Sellwood made a rough estimate of the ownership of the ores, on the Mesabi Range, outside of those owned by the United States Steel Corporation. This he said was only relatively and approximately correct. It is as follows:

	Tons.
Hill ore, embraced in lease to the United States Steel Corporation	150,000,000
Longyear, embraced in lease	100,000,000
Mahoning	150,000,000
Snyder	50,000,000
Pickands, Mather & Co	75,000,000
Jones & Laughlin	75,000,000
Corrigan, McKinney Co	50,000,000
Ridgway	25,000,000
Wisconsin Co	20,000,000
International Harvester Co	10,000,000
M. A. Hanna Co	50,000,000
Sundry small operators	50,000,000
Making a total of	805,000,000

Or, deducting the ores embraced in the Hill lease, 555,000,000 tons.

Judge Gary also estimates the ores embraced in the Hill lease at from 200,000,000 to 250,000,000 tons.

It will be seen that the estimates of the Minnesota Tax Commission, of Mr. Sellwood, and Mr. James J. Hill are practically agreed.

Mr. Thomas F. Cole, who was president of the Oliver Iron Mining Co., until about three years ago, placed a somewhat higher tonnage on the ores in Minnesota than either of the gentlemen named, but does not vary substantially the percentages fixed by them, as between the United States Steel Corporation and other owners. He fixed the tonnage of the United States Steel Corporation, outside the Hill lease, on the Mesabi and Vermillion Ranges, as in excess of 750,000,000 tons. Of this amount he says 20,000,000 to 25,000,000 tons are on the Vermillion Range. The independent holdings, on the Mesabi Range, including the ore covered by the Hill lease, are nearly equal to the United States Steel Corporation's holdings.

In this connection it may be remembered that Mr. James J. Hill, speaking of mining experts on the Minnesota ranges, said: "I would take Joe Sellwood and Tom Cole's estimates in preference to any 10 men I know."

Turning now to the Michigan ranges. In 1911 a very careful estimate of the ore on the Michigan ranges was made by Mr. James R. Finlay, of New York, a very distinguished engineer, for the Michigan Tax Commission, assisted by Dr. C. K. Leith, of the United States Geological Survey.

A summary of his estimate is printed in the hearings. According to such estimate the tonnage of the United States Steel Corporation in Michigan is 54,932,355 tons, and of other owners 135,020,809 tons. According to that estimate the United States Steel Corporation owns only 28.9 per cent of the available ores in Michigan.

Taking the estimate of Mr. Cole for the tonnage of the United States Steel Corporation in Minnesota, which is the highest tonnage given, and the estimate of the Minnesota Tax Commission for 1911 for the total tonnage in Minnesota, and the estimate of Mr. Finlay for the Michigan tonnages and we would have the following result:

	Tons.
Total tonnage in Minnesota	1,368,000,000
Total tonnage in Michigan	189,953,164
Total tonnage	1,557,953,164
Of which amount the United States Steel Corporation owns—	
In Minnesota	750,000,000
In Michigan	54,932,355
Or a total of	804,932,355

	Tons.
Others own—	
In Minnesota	618,000,000
In Michigan	135,020,809
Or a total of	753,020,809

Reduced to percentages, the United States Steel Corporation would own 51.6 per cent and other owners 48.4 per cent of the available Lake Superior ores.

But in making the above estimate we have taken the highest estimate of the United States Steel Corporation ores in Minnesota and lower estimates for the total. If we should take Mr. Sellwood's estimates for the Minnesota ores and Mr. Finlay's estimate for the Michigan ores we would have the following result:

	Tons.
Total tonnage in Minnesota	1,375,000,000
Total tonnage in Michigan	189,953,164
Total	1,564,953,164
Of which the United States Steel Corporation owns—	
In Minnesota	570,000,000
In Michigan	54,932,355
Total	624,932,355
Others own—	
In Minnesota	805,000,000
In Michigan	135,020,809
Total	940,020,808

Or, in percentages, the United States Steel Corporation owns 39.94 per cent—others own 60.06 per cent.

It is impossible to entirely reconcile these figures and it must be remembered that they represent the conditions which will prevail in 1915 when the surrender of the Hill lease, by the United States Steel Corporation becomes completely effected. At the present time the United States Steel Corporation has surrendered all of the property covered by the Hill lease upon which it is not carrying on active operations and the lessors now have possession of the same. The committee has no figures which will show approximately the amount of ore thus surrendered, but it must be considerable.

To ascertain the situation, previous to the surrender of the Hill lease, we can take the Minnesota Tax Commission figures for 1908 for Minnesota and the Finlay report for Michigan; this gives the following result:

	Tons.
Total tonnage in Minnesota	1,193,728,959
Total tonnage in Michigan	189,953,164
Total	1,383,682,123

nited States Steel Corporation:	Tons.
In Minnesota	752, 352, 166
In Michigan	54, 932, 355
Total	807, 284, 521
ther owners:	
In Minnesota	441, 376, 793
In Michigan	135, 020, 809
Total	576, 397, 602

Or on a percentage basis:

	Per cent.
nited States Steel Corporation	58. 35
ıdependents	41. 65

It is pretty clear that the United States Steel Corporation in 1915 ill control not to exceed 50 per cent of the available ore in the Lake uperior and Birmingham districts.

But this is not all of the ore situation. The ores from the Lake uperior district can not be profitably shipped farther east than Pittsurgh. All the furnaces east of that point must be supplied from the hamplain district, the Appalachian Range, the New Jersey ore, or om abroad.

The imports of ore in 1910 were 2,591,000,031 tons. Of this amount ,417,914 tons came from Cuba.

The known ore deposits of Cuba contain at least 2,000,000,000 tons ore, or more than the estimated tonnage of the entire Lake Superior istrict in available ores. Some difficulties have been experienced in ıe treatment of these ores, but these are now solved, and very large ›nnages will come into the United States in future years. Cuba robably will be the main source of supply for the Atlantic seaboard ıd eastern portion of the States of New York and Pennsylvania and ıe State of Maryland. Immense quantities of these ores are owned y the Bethlehem Steel Co. and by the Spanish-American Co., which a subsidiary of the Pennsylvania Steel Co.; but large quantities still main in private hands. Mr. Schwab states that the Bethlehem eel Co. have enough ores in Cuba to supply them for 250 years and presses the opinion that he might be able to ship these ores to irmingham and do a profitable business there in competition with e Birmingham ores. These ores can be shipped west nearly, if not ıite, to Pittsburgh in competition with Lake Superior ores. No ew of the ore situation in this country which leaves out of account ese vast bodies in Cuba is at all adequate.

Besides these deposits there are known to exist, in the United ates, of available ore, at least 100,000,000 tons in the Baraboo strict of Wisconsin; from 500,000,000 to 1,000,000,000 tons in tah; 100,000,000 tons in the Sunrise district of Wyoming;

250,000,000 tons in California; 100,000,000 tons in New Mexico; 500,000,000 tons in Texas; from 100,000,000 to 200,000,000 tons in the Champlain district of New York.

None of these districts, with the exception of the Champlain district of New York, have had anything like thorough exploration and it is probable that the amounts cited above are very much less than the real quantities of ore in these deposits. The Utah ores have a very high metallic content, low phosphorus and great intrinsic value. They are within 150 miles of coal and will no doubt be extensively worked in the future. It must be remembered, however, that the word "available" must be taken largely with reference to some particular district. The ore of Wyoming for instance is now being profitably worked by the Colorado Fuel & Iron Co., but is not available for the eastern furnaces; the ores of California, of New Mexico, of Utah, and of Texas will undoubtedly be used in the not distant future to supply the wants of the Pacific coast and Rocky Mountain States and to some degree to the east of that section. They could not, of course, be used east of the Mississippi River any more than the Lake Superior ores could be used at Bethlehem, or Steelton.

No one at all familiar with the developments of the mining of iron ore for the last 30 years can doubt that not only will large additional tonnage be discovered in the districts now known, but entirely new districts will be opened up. As an example of the development of old districts the Marquette Range, of Lake Superior, may be cited. Mining began there about 1854 and has been continued uninterruptedly until this time, and yet there is more ore known to exist in that district to-day than at any former period of its history and some of the most promising deposits have been discovered within the last three or four years. In addition to this, improvements in methods of manufacture are rapidly making available vast tonnages now classed as unavailable. (Hearings, pp. 5364, 5377, 3101, 3502; Hill, pp. 3235, 3237, 3206, 3190, 3200; Sellwood, pp. 5363, 5364, 5365, 5371, 5379, 5389, 5380, 5381, 5390, 5393; Gary, p. 82; Cole, pp. 5446, 5447, 5455, 5456, 5457, 5458, 5459, 5460, 5461, 5480, 5485, 5486, 5489; Finlay, p. 2020; Gayley, pp. 403, 404; Schwab, pp. 1293, 1333, 1334; Perin, pp. 1028, 1029.)

COAL.

The position of the United States Steel Corporation is very much weaker in regard to its reserves of coal than it is as to its reserves of iron ore.

In the Pittsburgh district, which includes the Connellsville region, there are about 360,000 acres of good coking coal, of which the United States Steel Corporation owns approximately one-seventh.

In the Birmingham district it owns not to exceed one-tenth, perhaps not one-twentieth of the entire deposit. (Hearings: Boileau, pp. 784, 790; Bacon, p. 5333.)

MONOPOLY OF BUSINESS.

The organization of the United States Steel Corporation had the effect to eliminate whatever competition formerly existed between the companies that became its subsidiaries, but there still remained strong and vigorous competition. Among the competitors were and are Jones & Laughlin (Ltd.), Cambria Steel Co., Pennsylvania Steel Co., Lackawanna Iron & Steel Co., Republic Iron & Steel Co., Bethlehem Steel Co., Colorado Fuel & Iron Co., and many others. Since the organization of the United States Steel Corporation, however, by purchase and by new construction, it has greatly increased its capacity, as is shown by the following table:

Product.	Capacity.		Per cent increase.
	Jan. 1, 1911.	Apr. 1. 1901.	
Blast furnace .... tons..	16,000,000	7,440,000	115
Steel ingots .... do....	18,000,000	9,425,000	91
Finished steel .... do....	13,750,000	7,719,000	78
Cement .... barrels..	8,000,000	500,000	1,500

While this increase seems large it should be remembered that the increase in production of steel during those years has been very much larger.

In 1900, the year before the United States Steel Corporation was organized, the total production of steel in this country was 10,188,329 tons, while in 1910 it was 26,094,919 tons.

In other words, while the capacity of the United States Steel Corporation has increased a little less than 100 per cent, the entire production of the country has increased nearly 160 per cent. The fact that the United States Steel Corporation is still losing ground, in the relative amount of its production, as compared with the so-called independent producers, is further emphasized by the following table:

ANNUAL PERCENTAGE OF PRODUCTION BY THE UNITED STATES STEEL CORPORATION FROM 1901 TO 1910.

[Compiled by the American Iron and Steel Association from returns of production made directly to the office of the association.]

The percentage of the Tennessee Coal, Iron & Railroad Co. is included below for 1907, 1908, 1909, and 1910 only. For prior years the production of this company is included with that of the independent companies. The United States Steel Corporation was incorporated on February 25, 1901, and was organized on April 1, 1901. The percentages given for 1901 are obtained by using the figures of production and shipments by the constituent companies of the corporation in the three months of that year prior to their absorption by the corporation and by the corporation for the remaining nine months.

Percentage of total production of leading articles by the United States Steel Corporation.

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Lake Supreior shipments of iron ore	61.6	60.4	58.8	53.8	56.0	54.2	54.8	56.0	51.4	51.1
Total production of iron ore	45.1	45.2	43.9	38.0	43.5	43.2	46.4	46.3	45.8	44.4
Total production of coke	41.1	37.5	34.3	36.6	38.0	36.5	33.2	31.4	34.6	32.7
Production of pig iron	43.2	44.8	40.4	44.7	44.2	44.5	44.3	43.5	45.0	43.3
Production of steel ingots and castings	65.7	65.2	63.1	60.7	60.0	57.8	57.1	55.9	55.8	54.3
Production of steel rails	59.8	67.7	64.4	54.3	51.2	50.2	52.2	55.0	57.4	58.8
Production of structural shapes	62.2	57.9	60.3	55.2	54.7	54.6	55.1	47.1	47.1	51.3
Production of plates and sheets	64.6	59.4	59.9	58.1	57.4	56.3	56.2	52.0	49.8	48.0
Production of wire rods	77.6	71.6	73.2	71.3	70.0	71.7	71.5	67.9	69.7	67.3
Production of rolled forms not enumerated above	27.3	31.2	30.1	29.2	31.7	34.7	35.3	32.0	39.4	37.6
Total production of finished rolled iron and steel	50.1	51.3	51.2	47.8	47.4	48.2	48.5	47.1	48.9	48.1
Production of wire nails	65.8	64.9	70.6	67.1	66.1	65.5	66.4	61.2	60.7	55.4
Production of tin plates and terneplates	73.0	73.4	78.3	71.3	71.8	74.5	73.6	69.9	61.9	61.0

It will be seen from this table that its relative proportion of the business of the country instead of increasing has steadily decreased. Its shipments of Lake Superior iron ore has fallen off from 60.4 per cent in 1901 to 51.1 per cent in 1910. Its production of coke has decreased from 37.5 per cent in 1901 to 32.7 per cent in 1910. Its production of ingots, etc., has fallen from 65.2 per cent in 1901 to 54.3 per cent in 1910. Even in the production of steel rails it has not quite held its own. Its production of structural shapes has fallen from 57.8 per cent in 1901 to 51.3 per cent in 1910, and even in wire rods its production has fallen from 71.6 per cent in 1901 to 67.3 per cent in 1910. (Hearings, No. 52, pp. 3524, 3466; No. 63, pp. 5514, 5515.)

PRICES.

Undoubtedly the question which most deeply interests the American people, in regard to the United States Steel Corporation, is what effect it has had upon the prices of iron and steel products which are furnished to the people of the United States. If it has had the effect, either through inefficiency or otherwise, to increase the cost to the public of the kind of products it manufactures, it is to be condemned upon economic grounds. If it has produced such an effect through illegal combinations, it is to be further condemned as a violator of the law.

Of course no one can be certain what the prices of steel products would have been if the United States Steel Corporation had not been organized, and therefore no one can prove with absolute certainty that the United States Steel Corporation has lowered prices beyond what they would have been if it had not been organized; but, on the other hand, those who seek to show that it has a tendency to increase prices will find little consolation in the facts ascertained by the committee. It is undoubtedly true that the corporation has a steadying effect upon prices. While the price of all steel products, with the single exception of "standard Bessemer steel rails," have fluctuated since its organization, those fluctuations have not been so extreme as during the years which preceded its organization.

Attention is called at this point to the following tables:

Average price of old range Bessemer ores at Lake Superior ports, per ton.

1855 to 1860	$6.95
1861 to 1870	7.05
1871 to 1880	7.82
1881 to 1890	6.20
1891 to 1900	3.63
1901 to 1910	4.32
1911	4.50
1912	3.75

(Hearings, No. 52, p. 3463; No. 6, p. 306.)

Average price of pig iron, per ton.

1855 to 1860	$24.92
1861 to 1870	38.88
1871 to 1880	29.12
1881 to 1890	19.63
1891 to 1900	12.65
1901 to 1910	17.09

(Hearings, No. 52, p. 5464.)

Average price best refined bar iron rolled, per ton.

1852 to 1860	$70.44
1861 to 1870	90.66
1871 to 1880	64.55
1881 to 1890	48.09
1891 to 1900	36.44
1901 to 1910	42.56

(Hearings, No. 36, pp. 2627, 2678.)

Average price common iron bars, Pittsburgh, per pound.

1845 to 1850	$0.035
1851 to 1860	.0344
1861 to 1870	.0423
1871 to 1880	.0285
1881 to 1890	.0191
1891 to 1900	.0135
1901 to 1910	.0157
1911	.013

(Hearings, No. 63, p. 5559.)

Average price steel billets, per ton.

1886 to 1890	$30.57
1891 to 1900	20.98
1901 to 1910	26.08

(Hearings, No. 36, pp. 2627, 2628.)

Average price of steel rails, per ton.

1867 to 1870	$140.86
1871 to 1880	76.08
1881 to 1890	36.92
1891 to 1900	26.10
1901 to 1910	27.93

(Hearings, No. 36, p. 2629.)

Average price of wire nails, per keg.

1887 to 1890	$2.67
1891 to 1900	1.88
1901 to 1910	2.09

(Hearings, No. 36, pp. 2627, 2628.)

Average price of tin plate, coke, per box.

1869 to 1870	$7.25
1871 to 1880	7.24
1881 to 1890	4.80
1891 to 1900	4.50
1901 to 1910	3.69

(Hearings, No. 36, pp. 2631, 2632, 2633.)

The prices of the principal other steel products would show substantially similar results.

The following tables covering the years since the organization of the United States Steel Corporation will show the general trend of prices:

Cast-iron pipe.

[Average prices 6-inch cast-iron water pipe, 30 pounds per foot, f. o. b. New York City, carload lots, per ton of 2,000 pounds.]

	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
January	24.50	29.25	24.50	28.00	29.75	34.25	27.00	24.50	25.75	22.00
February	25.00	29.25	24.25	28.50	29.50	34.25	26.75	24.25	25.75	21.50
March	26.25	30.75	24.25	26.75	30.50	34.00	26.25	25.25	25.75	21.00
April	26.00	31.00	24.25	27.00	29.75	33.50	26.25	25.00	25.75	21.00
May	27.75	30.75	24.00	27.25	31.00	34.25	26.25	25.25	25.75	21.00
June	28.00	30.75	23.50	27.25	32.50	33.50	25.75	26.00	25.50	21.00
July	28.50	30.75	23.50	27.25	30.25	34.00	25.75	26.25	24.25	21.00
August	29.50	29.50	23.50	27.25	30.50	32.50	25.25	26.00	23.75	21.00
September	29.50	29.00	23.00	27.25	31.00	33.00	25.75	25.75	23.75	21.00
October	29.50	26.00	23.25	28.25	33.00	33.50	25.75	25.50	23.25	21.00
November	30.75	24.50	25.00	29.00	33.25	28.50	25.00	27.00	22.00	21.75
December	29.25	24.25	27.00	29.25	35.50	28.00	25.50	27.25	22.00	22.00
Average	27.88	28.81	24.17	27.75	31.38	32.77	25.94	25.67	24.44	21.27

Bessemer steel billets.

[Average quotations, Pittsburgh.]

	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
January	25.60	25.00	21.56	16.12	14.90	16.80	15.42	14.93	16.62	34.50
February	26.00	24.36	21.62	15.75	14.95	17.38	15.25	15.06	18.00	34.87
March	26.25	23.00	22.60	15.55	14.84	17.09	15.44	15.25	24.30	33.00
April	25.35	22.81	22.44	15.69	15.44	19.53	14.60	15.06	25.37	32.00
May	25.50	22.41	21.69	18.00	16.30	19.50	13.82	14.85	26.75	28.90
June	25.25	22.97	21.70	18.12	18.63	19.12	14.06	14.65	30.10	27.25
July	25.50	23.50	21.06	18.00	20.75	18.85	14.00	14.50	33.12	21.00
August	25.31	23.81	20.45	17.15	21.75	18.75	14.00	15.85	35.40	18.20
September	25.00	23.65	19.31	17.19	24.00	19.75	15.60	16.00	38.37	16.93
October	24.90	23.53	18.06	16.00	21.90	19.75	16.44	15.56	38.75	16.50
November	24.16	24.94	17.37	15.57	19.13	20.00	15.57	15.06	36.50	18.95
December	24.20	22.40	16.69	15.12	16.97	17.50	15.00	15.80	33.75	19.75
Average	25.08	23.53	20.38	16.52	18.30	18.67	14.93	15.21	29.75	25.15

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
January	19.75	27.50	29.60	23.00	22.75	26.25	29.40	28.00	25.00	27.00	23.00
February	20.31	29.37	29.87	23.00	23.50	26.50	29.50	28.00	25.00	27.00	23.00
March	22.88	31.25	30.62	23.00	24.00	26.70	29.00	28.00	23.00	27.00	23.00
April	24.00	31.50	30.25	23.00	24.00	27.00	30.12	28.00	23.00	26.75	23.00
May	24.00	32.20	30.37	23.00	23.50	26.40	30.30	28.00	23.00	25.85	22.92
June	24.38	32.37	28.87	23.00	22.00	26.63	29.62	25.92	23.00	25.00	21.00
July	24.00	31.75	27.60	23.00	22.00	27.25	30.00	25.00	23.50	25.00	21.00
August	24.20	31.06	27.00	23.00	24.00	27.80	29.25	25.00	24.16	24.60	21.00
September	24.88	29.50	27.00	20.00	25.00	28.00	29.37	25.00	25.00	24.25	20.60
October	26.70	29.70	27.00	19.50	25.62	28.00	28.20	25.00	26.00	23.65	20.00
November	27.00	28.50	24.00	20.25	26.00	28.88	28.00	25.00	27.15	23.25	19.00
December	27.50	29.12	23.00	21.20	26.00	29.50	28.00	25 00	27.20	23.00	19.25
Average	24.13	30.32	27.93	22.08	24.03	27.41	29.23	26.33	24.58	25.20	21.40

Steel plates.

[Tank plate, Pittsburgh.]

AVERAGED QUARTERLY FROM OPEN QUOTATIONS.

Year.	First.	Second.	Third.	Fourth.	Year
1892	1.92	1.85	1.80	1.74	1.83
1893	1.69	1.58	1.54	1.41	1.56
1894	1.23	1.18	1.21	1.17	1.20
1895	1.12	1.21	1.73	1.63	1.42
1896	1.35	1.32	1.19	1.12	1.24
1897	1.10	1.06	1.00	1.04	1.05
1898	1.00	1.07	1.11	1.13	1.08
1899	1.49	2.16	2.62	2.54	2.20
1900	2.17	1.65	1.13	1.27	1.55
1901	1.42	1.56	1.60	1.60	1.55
1902 [1]	1.60	1.60	1.60	1.60	1.60
1903	1.60	1.60	1.60	1.60	1.60
1904	1.60	1.60	1.55	1.42	1.54
1905	1.55	1.60	1.60	1.60	1.59
1906	1.60	1.60	1.60	1.64	1.61
1907	1.70	1.70	1.70	1.70	1.70
1908	1.70	1.67	1.60	1.60	1.64
1909	1.47	1.26	1.39	1.53	1.41
1910	1.55	1.49	1.39	1.38	1.45
1911	1.40	1.38	1.31	1.14	1.31

[1] Premiums for prompt delivery.

Structural shapes.

QUARTERLY AVERAGES OF QUOTATIONS.

Year.	First.	Second.	Third.	Fourth.	Year.
1894	1.21	1.20	1.27	1.25	1.23
1895	1.21	1.25	1.56	1.58	1.40
1896	1.44	1.49	1.55	1.50	1.49
1897	1.55	1.33	.98	1.09	1.24
1898	1.15	1.15	1.19	1.20	1.17
1899	1.35	1.60	2.12	2.25	1.83
1900	2.25	2.21	1.68	1.50	1.91
1901	1.51	1.60	1.60	1.60	1.58
1902	1.60	1.60	1.60	1.60	1.60
1903	1.60	1.60	1.60	1.60	1.60
1904	1.60	1.60	1.55	1.41	1.54
1905	1.55	1.60	1.63	1.70	1.62
1906	1.70	1.70	1.70	1.70	1.70
1907	1.70	1.70	1.70	1.70	1.70
1908	1.70	1.68	1.60	1.60	1.64
1909	1.43	1.25	1.40	1.53	1.40
1910	1.55	1.49	1.41	1.40	1.46
1911	1.40	1.38	1.34	1.17	1.32

The following table gives the average quarterly prices of steel beams and channels at Pittsburgh from 1894 to 1911.

Average quarterly prices of beams and channels.

[Average price per 100 pounds.]

Year.	First quarter.	Second quarter.	Third quarter.	Fourth quarter.	Average.
1894	$1.21	$1.20	$1.27	$1.25	$1.23
1895	1.21	1.25	1.56	1.58	1.49
1896	1.44	1.49	1.55	1.50	1.49
1897	1.55	1.33	.98	1.09	1.24
1898	1.15	1.15	1.19	1.20	1.17
1899	1.35	1.60	2.12	2.25	1.83
1900	2.25	2.21	1.68	1.50	1.91
1901	1.51	1.60	1.60	1.60	1.58
1902	1.60	1.60	1.60	1.60	1.60
1903	1.60	1.60	1.60	1.60	1.60
1904	1.60	1.60	1.55	1.41	1.54
1905	1.55	1.60	1.63	1.70	1.62
1906	1.70	1.70	1.70	1.70	1.70
1907	1.70	1.70	1.70	1.70	1.70
1908	1.70	1.68	1.60	1.60	1.64
1909	1.45	1.25	1.40	1.53	1.41
1910	1.55	1.53	1.41	1.40	1.47
1911	1.40				

During the above period the lowest average quarterly price was in the third quarter of 1897, 98 cents per 100 pounds. The highest average quarterly price was in the last quarter of 1899 and the first quarter of 1900. The average price for April and May, 1911, was $1.40. On June 1, the price was $1.35. (Annual Statistical Rept. of the American Iron and Steel Association, July 25, 1911, p. 46.)

Average monthly prices of wire nails, Chicago.

[Per keg of 100 pounds.]

[Annual Statistical Report of the American Iron and Steel Association, July 25, 1911, p. 50.]

Months.	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
January	$2.35	$2.16	$2.08	$2.04	$1.90	$1.94	$2.15	$2.23	$2.13	$2.03
February	2.45	2.20	2.12	2.05	1.95	1.95	2.15	2.23	2.13	2.03
March	2.45	2.20	2.20	2.09	1.95	1.95	2.15	2.23	2.13	2.03
April	2.45	2.20	2.15	2.10	1.95	1.95	2.15	2.23	2.13	2.03
May	2.45	2.20	2.15	2.10	1.95	1.95	2.15	2.23	1.83	2.03
June	2.45	2.20	2.15	2.07	1.95	1.95	2.18	2.13	1.88	2.03
July	2.45	2.20	2.15	2.05	1.95	1.95	2.18	2.13	1.90	1.94
August	2.45	2.20	2.15	1.90	1.87	1.95	2.18	2.13	1.98	1.88
September	2.45	2.15	2.15	1.75	1.87	1.96	2.23	2.13	1.98	1.88
October	2.42	2.05	2.15	1.75	1.95	2.00	2.23	2.13	1.98	1.88
November	2.35	2.00	2.15	1.77	1.95	2.04	2.23	2.13	1.98	1.88
December	2.25	2.00	2.00	1.88	1.95	2.15	2.23	2.13	2.00	1.88
Average	2.41	2.15	2.13	1.96	1.93	1.98	2.18	2.17	2.00	1.96

The following table, published by the Wall Street Journal, gives the average yearly prices per gross ton of eight leading steel products from 1901 to 1910, inclusive, together with the so-called official prices as of May, 1911, in dollars:

Year.	Steel rails.	Ship plates, Pittsburgh.	Wire nails, Pittsburgh.	Steel bars, Pittsburgh.	Beams, Pittsburgh.	Tin-plate mill.	Bessemer iron, Pittsburgh.	Steel billets, Pittsburgh.	Average.
1911	28.00	31.36	40.32	31.36	31.36	82.88	15.75	23.00	35.50
1910	28.00	32.60	40.09	32.03	32.92	80.64	17.19	25.39	36.11
1909	28.00	31.70	40.70	29.56	31.58	78.40	17.41	24.58	35.24
1908	28.00	36.84	44.35	33.15	36.73	82.88	17.07	26.31	38.17
1907	28.00	38.08	45.02	35.84	38.08	87.96	22.84	29.23	40.63
1906	28.00	35.84	41.56	35.39	38.08	88.56	19.54	27.41	39.29
1905	28.00	35.61	39.42	35.39	35.28	78.40	16.36	24.69	36.64
1904	28.00	34.52	40.32	29.56	34.49	76.38	13.76	22.08	34.89
1903	28.00	35.84	44.12	34.94	36.84	89.76	18.88	27.93	39.54
1902	28.00	35.84	44.57	37.40	35.38	88.03	20.15	30.32	39.96
1901	27.40	34.87	50.40	32.92	35.39	89.60	15.72	24.13	38.80

NOTE.—1911 prices represent present prices.

It will thus be seen that the average price of iron ore, pig iron, and steel products during the 10 years since the organization of the United States Steel Corporation has been the lowest of any decade in our history, except the one from 1890 to 1900, when the conditions for a considerable period were abnormal. If a comparison should be made between the year 1900, just previous to the organization of the United States Steel Corporation, and 1911, the decrease in prices would be still more striking.

That the price of iron and steel should have a considerable decrease since the organization of the United States Steel Corporation is a little remarkable when it is considered that the course of prices generally has been in the other direction and the wages of labor have considerably advanced. The wages paid to labor in 1902 amounted to $14.70 per ton of production and in 1910 to $16.30 per ton. In other words, based upon the production of 1910 the increase of wages for that year, above the wages prevailing in 1902, amount to over $17,000,000. To this amount should be added the sums paid in bonuses and for old-age pensions and for accident relief, which would add from $2,000,000 to $3,000,000 a year. (Hearings, No. 52, pp. 3530, 3531.)

It appeared, from the undisputed testimony, that the wages paid by the United States Steel Corporation in the Pittsburgh district were a little higher than those paid by its competitors in the same district, the lowest wages paid being 17½ cents per hour to common labor.

Complaint has been made in the past as to the hours of labor, which have been excessive. These are the same as those of other companies in the business and the same as existed when the United States Steel Corporation was organized. The long hours have arisen from the necessity of continuous operation in the making of steel, but the corporation has taken steps which have already resulted in the elimination of the 24-hour day, or the long turn at the time when the shifts were changed from night to day or from day to night. The practical elimination of the seven-day week and the general betterment of local conditions are shown by extensive tables and are printed in the hearings, beginning with page 3310 and continuing to page 3388, showing the actual number of hours worked and number of days worked in a month and the nationality of the laborers. While the condition of labor is not ideal, it is at least as good as among the competitors of the United States Steel Corporation.

CONCLUSIONS OF H. O. YOUNG ON THE FACTS.

ORGANIZATION.

1. The United States Steel Corporation when organized was greatly overcapitalized, but to a great extent this has been remedied by extensive investment of earnings since its organization.

2. The objects aimed at in the organization of the United States Steel Corporation were:

(*a*) Greater integration and the consequent increased economy and efficiency in operation and the avoidance of paying profits to outsiders.

(*b*) Promotion and stock market profits.

(*c*) Lessening of severe competition.

RAILROADS.

3. The Interstate Commerce Commission with the aid of the several State railroad commissions has ample power to correct all practices incident to the ownership of railroads by the corporation which

are unfair to competitors or inimical to the general welfare. To claim that it has not such power is to say that it has utterly failed in the purpose for which it was created and given its present extensive powers and to leave little excuse for its further continuance.

4. In some instances the share of the through rate received by the railroads owned by the United States Steel Corporation is so excessive as to call for early action by the Interstate Commerce Commission. It is but just to state, however, that these rates were all inherited by the United States Steel Corporation. That in no instance have they been increased by the United States Steel Corporation, although in some instances they have been lowered by that corporation, and that the practice denounced is shared by many other manufacturers in many lines of business.

RESTRAINT OF TRADE.

5. Previous to the organization of the United States Steel Corporation several corporations, engaged in the manufacture of plates, structural iron, and wire, some of which subsequently became subsidiaries of the United States Steel Corporation, entered into illegal pooling contracts, fixing prices, and dividing production on a percentage basis. Under these contracts they continued to act after the organization of the United States Steel Corporation, in the case of plate and structural iron agreements, until January 1, 1905, and in the case of the wire agreements until a later date. The plate and structural steel agreements were brought to an end by the direct intervention of Judge Gary. Judge Gary denied any knowledge of the existence of the wire pools, and there is no evidence to the contrary. The circumstances are such, however, as to indicate that some of the officials of the United States Steel Corporation must have been cognizant of these acts.

6. One of the main purposes of the Gary dinners, so called, was, by creating confidence and friendly relations among the manufacturers of steel, to maintain prices and prevent destructive trade wars.

MONOPOLY.

7. The United States Steel Corporation, outside of the so-called Hill lease, which it has exercised its option to cancel, controls about one-half of the now available iron ore in the Lake Superior district, and not to exceed one-half of the now available iron ore in the Birmingham district. Its ownership or control of iron ore in other portions of this country, or in Cuba, is inconsiderable. It owns a very much smaller proportion of the coking coal of the country than it does of the iron ore, while it produces a little more than half of the steel products of the country. In other words, its acquisition of raw

materials has not kept pace with its manufacturing capacity or achievements. Its ownership of now available Lake Superior ores does not exceed 40 years' supply at the present rate of consumption, and considering its vast investment in plants is no more than common prudence would dictate it should acquire, and lacks very much of being a monopoly.

8. The entire production of the United States Steel Corporation, relative to the entire iron and steel production of the country, has steadily decreased since its organization and is lower now than at any former period of its history, while the relative proportion of the production of the other manufacturers of iron and steel, in this country, has steadily increased and is higher now than at any period since the organization of the United States Steel Corporation. The United States Steel Corporation, since its organization, has by purchase and new construction about doubled its capacity, but in the same time the production of the country has increased about 160 per cent, so that neither in production or capacity has the United States Steel Corporation kept pace with the growth of the iron and steel industry.

PRICES.

9. The general tendency of iron and steel products since the organization of the United States Steel Corporation, though they had many fluctuations, has been downward. The average price of steel products since its organization have been lower than during any other like period in our history, except the decade from 1890 to 1900, during which conditions in all industries were abnormally depressed and labor was unemployed. I am of the opinion that the United States Steel Corporation has to some extent steadied prices and prevented wide fluctuations, but that on the other hand prices are as low, and probably lower, than they would have been if this company had never existed.

TENNESSEE COAL, IRON & RAILROAD CO.

10. During the height of the panic of 1907, Moore & Schley, bankers and brokers of importance in the city of New York, had among their assets, mainly as collateral for loans, about 150,000 shares of the stock of the Tennessee Coal, Iron & Railroad Co., about 100,000 shares of which they had rehypothecated with various bankers as a part of the collateral for their own indebtedness, which amounted to about $38,000,000, nearly all of which had come due. The stock was uncurrent and not deemed good collateral, especially in times of panic. Moore & Schley caused the United States Steel Corporation to be approached with a view to a sale of the stock of the Tennessee Coal, Iron & Railroad Co., in order to relieve their own situation.

11. There is not the slightest evidence that there was any attempt by the United States Steel Corporation, or J. P. Morgan & Co., or anyone else to depress Tennessee Coal, Iron & Railroad Co. stock in the market or to embarrass its owners, or Moore & Schley, so as to buy the stock cheap. On the contrary, the evidence shows conclusively that all of the business interests in New York City were working unselfishly and patriotically to stem the tide of the panic and financial disaster that was sweeping over the country.

12. The failure of Moore & Schley at the time would probably have resulted in many other failures and in greatly aggravating the panic and spreading loss and suffering among millions of our people.

13. Moore & Schley would probably have failed but for the relief offered by the sale of the Tennessee Coal, Iron & Railroad Co. stock. No other practicable means of saving them was proposed by themselves or anyone else. Judge Gary, on the part of the United States Steel Corporation, offered a loan of $5,000,000, and this was rejected by Mr. Schley as wholly inadequate.

14. Messrs. Frick and Gary made frank and truthful statements to President Roosevelt of the material facts of the case.

15. The steps taken by President Roosevelt in the matter were inspired by patriotic motives. They gave the United States Steel Corporation no additional rights and granted it no immunity from civil or criminal prosecution should it later appear that it had in any way violated the law.

16. The effect of the sale of the Tennessee Coal, Iron & Railroad Co. stock was to place over $12,000,000 in Moore & Schley's hands to enable them to reduce their loans with the banks from $35,000,000 to $23,000,000, to turn their assets into cash, to add $3,600,000 to their reserves, and to render them impregnable. It was one of the most important steps in allaying the panic.

17. The United States Steel Corporation was not overanxious to buy the stock of the Tennessee Coal, Iron & Railroad Co. Those who engineered the sale on the part of the Tennessee Coal, Iron & Railroad Co. demanded and obtained the agreement that all the stockholders should have the option to sell at the same price. All the stockholders availed themselves of the option, showing that they thought the price reasonable. Full value was paid for the stock, and it has not so far proven a very profitable purchase.

18. Its purchase did not give the United States Steel Corporation, through the ownership of raw materials or otherwise, a monopoly of the iron and steel business of the whole or any portion of the South.

SEPARATE VIEWS OF MR. STERLING ON INVESTIGATION OF UNITED STATES STEEL CORPORATION.

I do not concur in all the recommendations of the minority nor in all the views therein expressed.

I heartily favor governmental regulation of corporations engaged in interstate commerce. The first step in this direction is legislation providing for Federal incorporation. Such legislation should limit the capitalization to the actual value of the corporate property and thus eliminate from the commerce of the country that abominable fiction of values commonly termed "watered stock."

The extent to which fictitious values have been created by overcapitalization of corporate property has shaken public confidence in corporate securities and made the public mind distrustful of large business enterprises. This policy has cheated both the investor and the consumer. The investor has purchased stock under the mistaken belief that the face had some relation to the value. The consumer of corporate products has come to feel, and with much justification, that he has been made to pay exorbitant profits to overcapitalized corporations that they might pay dividends on fictitious stock values.

Such legislation should provide for a system of reports, to a commission or other Government agency, giving full publicity to the manner and purpose of the organization, its methods of doing business, and it profits. It should provide for rigid supervision of all issues of securities and prohibit one corporation from holding stock in another, and limit the extent to which two or more corporations may have common directorates.

I do not concur in the view of the minority that the true remedy for industrial evils does not lie in the dissolution of industrial trusts. I am of the opinion that the dissolution of the great industrial combinations into their integral parts would do much to restore trade to a natural and healthy condition and inspire confidence of the people in the business situation and revive commercial prosperity.

The proposition that the Government shall recognize and permit to exist trusts, monopolies, and combinations in restraint of trade and then regulate them by legislative control, is one calculated to suppress individual enterprise and destroy competition. From such a recommendation I unhesitatingly dissent. It is conceded that such a policy would result necessarily in the fixing of prices of the products of such combinations by law. If Government undertakes to do that, where will be the end? If Government fixes the price of the finished product, must it not also fix the price of the raw material and of the labor that converts it?

If Government undertakes to fix the price of labor, must it not also, in the ultimate analysis, fix the price of those things which sustain the laborer, such as food, clothing, and shelter? Such a condition to my mind would be subversive of the principles of free institutions and free men.

It is urged that large industrial combinations can produce more cheaply than small ones. This is a fundamental fallacy from which proceeds the paternalistic doctrine that Government shall recognize and permit monopolistic combinations and fix the price of their product. Competition is certainly more conducive to progress than is monopoly. Its very essence is improved methods, better machinery, greater skill, and hence more economic production. Its beneficence does not stop at cheaper production and cheaper distribution.

In its very nature it prevents exorbitant profits and compels capital to be satisfied with a fair return.

The Federal Government by proper legislation can resolve great combinations into their integral parts, and then by wise and just regulation of corporate powers maintain a natural and healthy condition of trade. It is plainly its duty to do so.

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